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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 10	Time limit for inactive STN sessions doubles to 40 minutes
NEWS	3	AUG 18	COMPENDEX indexing changed for the Corporate Source (CS) field
NEWS	4	AUG 24	ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS	5	AUG 24	CA/CAPLUS enhanced with legal status information for U.S. patents
NEWS	6	SEP 09	50 Millionth Unique Chemical Substance Recorded in CAS REGISTRY
NEWS	7	SEP 11	WPIDS, WPINDEX, and WPIX now include Japanese FTERM thesaurus
NEWS	8	OCT 21	Derwent World Patents Index Coverage of Indian and Taiwanese Content Expanded
NEWS	9	OCT 21	Derwent World Patents Index enhanced with human translated claims for Chinese Applications and Utility Models
NEWS	10	NOV 23	Addition of SCAN format to selected STN databases
NEWS	11	NOV 23	Annual Reload of IFI Databases
NEWS	12	DEC 01	FRFULL Content and Search Enhancements
NEWS	13	DEC 01	DGENE, USGENE, and PCTGEN: new percent identity feature for sorting BLAST answer sets
NEWS	14	DEC 02	Derwent World Patent Index: Japanese FI-TERM thesaurus added
NEWS	15	DEC 02	PCTGEN enhanced with patent family and legal status display data from INPADOCDB
NEWS	16	DEC 02	USGENE: Enhanced coverage of bibliographic and sequence information
NEWS	17	DEC 21	New Indicator Identifies Multiple Basic Patent Records Containing Equivalent Chemical Indexing in CA/CAPLUS

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,  
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

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STRUCTURE FILE UPDATES: 22 DEC 2009 HIGHEST RN 1198566-95-8

DICTIONARY FILE UPDATES: 22 DEC 2009 HIGHEST RN 1198566-95-8

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

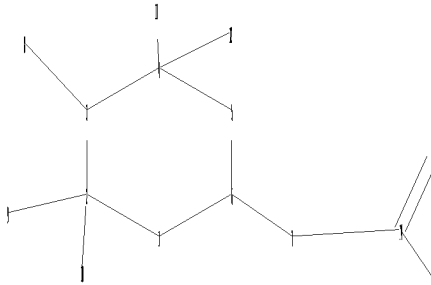
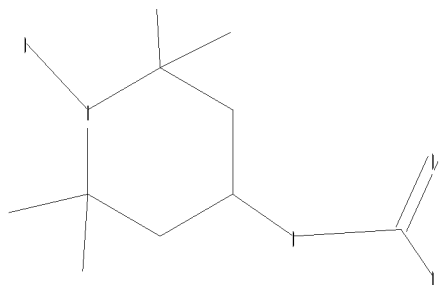
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=>

Uploading C:\Program Files\Stnexp\Queries\10591533.str



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chain nodes :  
7 14  
ring nodes :  
1 2 3 4 5 6  
ring/chain nodes :  
8 9 10 11 12 15 16  
chain bonds :  
2-9 2-10 3-8 4-11 4-12 6-7 7-14 14-15 14-16  
ring bonds :  
1-2 1-6 2-3 3-4 4-5 5-6  
exact/norm bonds :  
1-2 1-6 2-3 3-8 5-6 6-7 7-14 14-15 14-16  
exact bonds :  
2-9 2-10 3-4 4-5 4-11 4-12  
isolated ring systems :  
containing 1 :

Match level :

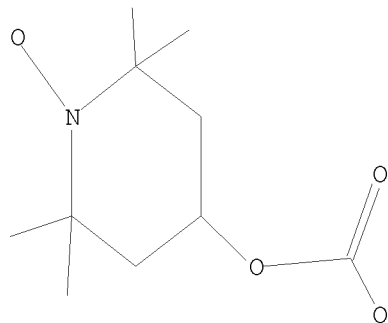
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
11:CLASS 12:CLASS 14:CLASS 15:CLASS 16:CLASS

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 15:37:54 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 5 TO 234

PROJECTED ANSWERS: 1 TO 80

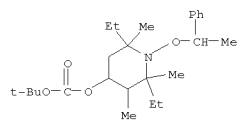
L2 1 SEA SSS SAM L1

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=> d scan

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L2 1 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN  
IN Carbonic acid, 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)-4-  
piperidinyl 1,1-dimethylethyl ester  
MF C25 H41 N O4



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

ALL ANSWERS HAVE BEEN SCANNED

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=> 1

1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 full

FULL SEARCH INITIATED 15:38:04 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 93 TO ITERATE

100.0% PROCESSED 93 ITERATIONS 33 ANSWERS  
SEARCH TIME: 00.00.01

L3 33 SEA SSS FUL L1

=> file cpalus

'CPALUS' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'REGISTRY'

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files  
that are available. If you have requested multiple files, you can  
specify a corrected file name or you can enter "IGNORE" to continue  
accessing the remaining file names entered.

=> file caplus

FILE 'CAPLUS' ENTERED AT 15:38:13 ON 23 DEC 2009

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FILE COVERS 1907 - 23 Dec 2009 VOL 151 ISS 26

FILE LAST UPDATED: 22 Dec 2009 (20091222/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

Caplus now includes complete International Patent Classification (IPC)  
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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=> d his

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FILE 'REGISTRY' ENTERED AT 15:37:33 ON 23 DEC 2009

L1               STRUCTURE UPLOADED

L2               1 S L1

L3               33 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:38:13 ON 23 DEC 2009

=> s 13

L4               67 L3

=> d cbib abs hitstr 1-

YOU HAVE REQUESTED DATA FROM 67 ANSWERS - CONTINUE? Y/(N):y





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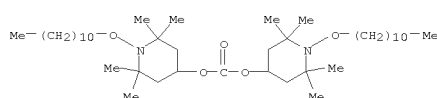
L4 ANSWER 4 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:1131570 Document No. 151:382449 Poly(lactic acid resin composition containing hindered amine having excellent weather resistance. Negishi, Yoshinori; Mizokawa, Shigeo (Adeka Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2009209177 A 20090917, 15pp.; Chemical Indexing Equivalent to 151:314707 (WO) (Japanese). CODEN: JKOXAF. APPLICATION: JP 2008-50630 20080229.

AB The invention relates to a poly(lactic acid resin composition obtained by blending 0.005-30 parts of a hindered amine compound, which has a partial structure represented by formula -C(R1)(R2)-N(OR)-C(R3)(R4)-, per 100 parts of a poly(lactic acid resin; wherein R1, R2, R3 and R4 independently represent an alkyl group having 1-4 carbon atoms; and R represents an alkyl group having 1-18 carbon atoms which may be substituted by a hydroxyl group, an acyl group having 1-18 carbon atoms or a cycloalkyl group having 5-8 carbon atoms. Thus, a poly(lactic acid resin composition suppressing crystallization and having excellent weather resistance was prepared by

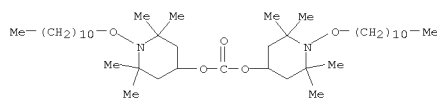
mix-dissolving poly(lactic acid resin (Lacea H 100) 1.25 g and a hindered amine 0.375 mg in methylene chloride, and by casting the solution to give a cast film having a crack generation time of 1440 h and a hazing rate caused by crystallization of 6.6% after 360 h.

IT 705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(production of poly(lactic acid resin composition containing hindered amine having excellent weather resistance)

RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)



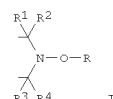
L4 ANSWER 5 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



L4 ANSWER 5 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:1081125 Document No. 151:314717 Woody synthetic resin composition having improved weather resistance and molded body thereof. Fukushima, Mitsuru; Mizokawa, Shigeo; Mizu, Masumi (Adeka Corporation, Japan). PCT Int. Appl. WO 2009107502 A1 20090903, 25pp.; Chemical Indexing Equivalent to 151:314742 (JP) DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU, AZ,

BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2009-JP52539 20090216. PRIORITY: JP 2008-51060 20080229.

GI



AB Disclosed are a woody synthetic resin composition having excellent weather resistance, and a molded body of the woody synthetic resin compn (e.g., ethylene-propylene copolymer). The woody synthetic resin composition is obtained by blending 5-200 parts by mass of wood flour and 0.01-5 parts by mass of a hindered amine compound having a partial structure represented by the general formula I per 100 parts by mass of a synthetic resin (R1, R2, R3 and R4 independently represent an alkyl group having 1-4 carbon atoms; and R represents an alkyl group having 1-18 carbon atoms, an alkyl group substituted by a hydroxy group or a cycloalkyl group having 5-8 carbon atoms).

IT 705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(woody synthetic resin composition having improved weather resistance and molded body thereof)

RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)

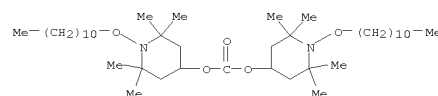
L4 ANSWER 6 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:1080458 Document No. 151:314707 Poly(lactic acid resin composition containing hindered amine having excellent weather resistance. Negishi, Yoshinori; Mizokawa, Shigeo (Adeka Corp., Japan). PCT Int. Appl. WO 2009107504 A1 20090903, 25pp.; Chemical Indexing Equivalent to 151:382449 (JP) DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2009-JP52563 20090216. PRIORITY: JP 2008-50630 20080229.

AB The invention relates to a poly(lactic acid resin composition obtained by blending 0.005-30 parts of a hindered amine compound, which has a partial structure represented by formula -C(R1)(R2)-N(OR)-C(R3)(R4)-, per 100 parts of a poly(lactic acid resin; wherein R1, R2, R3 and R4 independently represent an alkyl group having 1-4 carbon atoms; and R represents an alkyl group having 1-18 carbon atoms which may be substituted by a hydroxyl group, an acyl group having 1-18 carbon atoms or a cycloalkyl group having 5-8 carbon atoms. Thus, a poly(lactic acid resin composition suppressing crystallization and having excellent weather resistance was prepared by

mix-dissolving poly(lactic acid resin (Lacea H 100) 1.25 g and a hindered amine 0.375 mg in methylene chloride, and by casting the solution to give a cast film having a crack generation time of 1440 h and a hazing rate caused by crystallization of 6.6% after 360 h.

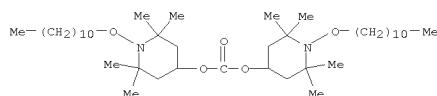
IT 705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(production of poly(lactic acid resin composition containing hindered amine having excellent weather resistance)

RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)

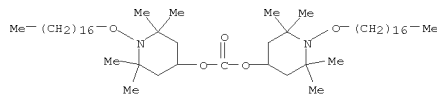


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L4 ANSWER 7 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:1077233 Document No. 151:315867 Sealing compositions containing  
 hydrolyzable silyl-containing polymers with suppressed peeling from  
 glass.  
 Oka, Toru; Murase, Masaaki; Nakayama, Yoshimitsu (Sunstar Engineering  
 Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2009197177 A 20090903, 16pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2008-42699 20080225.  
 AB The compns., useful for sealing light-transmitting parts (e.g., glass),  
 preferably with silicone sealants, contain the polymers and hindered  
 amines bearing N-(C1-20-alkoxy)-2,2,6,6-tetramethyl-4-piperidyl groups.  
 Thus, applying a sealant containing Epion EP 505S (alkoxysilyl-terminated  
 polyisobutylene) 160, Epikote 828 (epoxy resin) 6, Tinuvin 123 (HALS) 1,  
 and S 1000 (silyl-crosslinkable reactive plasticizer) 40 parts to a  
 primer-coated Al alloy sheet and bonding it to a float glass sheet via  
 Penguinseal 2520 (silicone sealant) gave a test piece showing good  
 interlayer adhesion and weather resistance.  
 IT 705257-84-7 863984-48-9 1185256-91-0  
 1185256-92-1  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Light stabilizer; sealing compns. containing hydrolyzable  
 silyl-containing  
 polymers and N-alkoxy HALS with suppressed peeling from glass)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
 INDEX NAME)

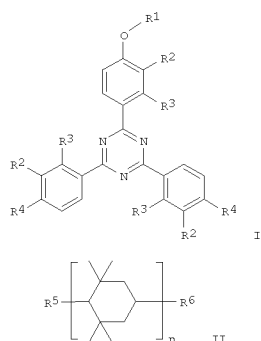


RN 863984-48-9 CAPLUS  
 CN 4-Piperidinol, 1-(heptadecyloxy)-2,2,6,6-tetramethyl-, carbonate (2:1)  
 (ester) (9CI) (CA INDEX NAME)



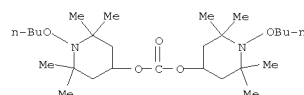
RN 1185256-91-0 CAPLUS  
 CN 4-Piperidinol, 1-butoxy-2,2,6,6-tetramethyl-, 4,4'-carbonate (CA INDEX  
 NAME)

L4 ANSWER 8 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:916510 Document No. 151:222190 UV absorber compositions,  
 light-resistant synthetic polymer compositions containing them, and  
 films,  
 sheets, and coatings comprising them. Yoshitake, Toshitaka; Tanaka,  
 Tomoki; Kamimoto, Tetsuo (Adeka Corp., Japan). Jpn. Kokai Tokkyo Koho JP  
 2009167416 A 20090730, 25pp. (Japanese). CODEN: JKXXAF. APPLICATION:  
 JP 2009-35773 20090218.  
 GI

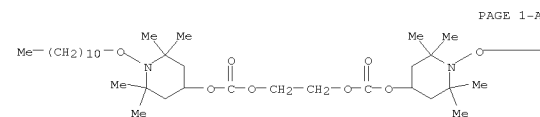


AB The UV absorber compns. contain triazine compds. of I (R1 = C1-12 alkyl,  
 C3-8 cycloalkyl, C3-8 alkenyl, C6-18 aryl, C7-18 alkylaryl, C7-18  
 arylalkyl; R2 = H, C1-8 alkyl, C3-8 alkenyl; R3 = H, OH; R4 = H, OR1) and  
 hindered amines of II (R5 = C1-12 alkyl, C1-12 alkoxy; R6 = carbonate,  
 mono-, di-, tri-, or tetravalent organic carboxylic acid residue; n =  
 1-4).  
 Thus, a composition comprising triacetyl cellulose (LT 35) 100, I (R1 =  
 CH2CH2CH2CO2Me, R2 = Me, R3 = OH, R4 = OR1) 0.2, and II (R5 = OC11H23, R6  
 = carbonate, n = 2) 0.2 part was cast to give a film showing change in  
 yellowness index (ΔYI) 0.22, 0.49, and 0.78 after a weathering test  
 (83%, no rain, carbon arc) for 120, 240, and 360 h, resp.  
 IT 705257-84-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (UV absorber; UV absorber compns. for light-resistant synthetic  
 polymer  
 films, sheets, and coatings)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
 INDEX NAME)

L4 ANSWER 7 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 1185256-92-1 CAPLUS  
 CN Carbonic acid, C,C'-1,2-ethanediyl  
 C,C'-bis[2,2,6,6-tetramethyl-1-(undecyloxy)-4-piperidinyl] ester (CA  
 INDEX NAME)

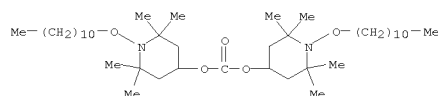


PAGE 1-A



PAGE 1-B

L4 ANSWER 8 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



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L4 ANSWER 9 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:795991 Document No. 151:79136 UV stabilized crosslinkable polyolefin  
compositions comprising acidic silanol condensation catalysts. Nylander,  
Perry (Borealis Technology Oy, Finland). PCT Int. Appl. WO 2009080235 A1  
20090702, 33pp.; Chemical Indexing Equivalent to 151:79085 (EP)  
DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH,

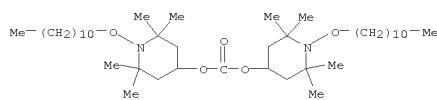
BR,

BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,  
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,  
KM, KN, KP, KR, KZ, LA, LC, LK, LB, LS, LT, LU, LY, MA, MD, ME, MG, MK,  
MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,  
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR; RW: AT, BE, BF,  
BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT,  
LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD, TG, TR. (English).  
CODEN: PIXXD2. APPLICATION: WO 2008-EP10653 20081215. PRIORITY: EP  
2007-24836 20071220.

AB A polyolefin composition comprises a crosslinkable polyolefin with  
hydrolyzable silane groups, and a silanol condensation catalyst, wherein the  
composition is characterized by excellent curing properties, namely, the maximum torque  
 $\Delta F$  is  $> 40$  Nm and the crosslinking speed is  $> 0.1$  Nm/s in the ice  
test, and retention of  $> 60\%$  of the elongation at break after 500 h in  
SEFAP UV exposure. Preferably, the polyolefin composition further  
comprises at least one UV stabilizer that is acidic ( $pH \leq 6.2$ , measured at  
20-25° in 1% suspension). The polyolefin composition can be used for  
production of tubes and insulating layers for elec. wires and cables.

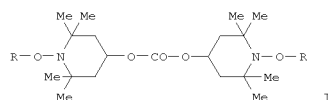
IT

705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(ADK-Stab LA 81; UV stabilized crosslinkable polyolefin compns.  
comprising acidic silanol condensation catalysts)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
INDEX NAME)



L4 ANSWER 11 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:671515 Document No. 150:565321 Resin composition and resin molded  
article with good weather resistance. Mizokawa, Shigeo; Negishi,  
Yoshinori (Adeka Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2009120723 A  
20090604, 14pp.; Chemical Indexing Equivalent to 150:565158 (WO)  
(Japanese). CODEN: JKXAXF. APPLICATION: JP 2007-296312 20071115.

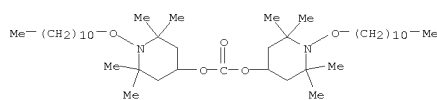
GI



AB Disclosed is a resin composition containing zinc sulfide and having  
excellent weather resistance. Also disclosed is a resin molded article obtained by  
using such a resin composition. Specifically disclosed is a resin  
composition obtained by blending 0.1-20 parts by weight of zinc sulfide (A) and  
0.01-20 parts by weight of a hindered amine compound (B) having a structure  
represented by the general formula I (R independently representing an alkyl group  
having 1-18 carbon atoms which may be substituted by a hydroxyl group, an  
acyl group having 1-18 carbon atoms, or a cycloalkyl group having 5-8  
carbon atoms), per 100 parts by weight of a resin.

IT

705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(resin composition and resin molded article with good weather  
resistance)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
INDEX NAME)



L4 ANSWER 10 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:756280 Document No. 151:79085 UV stabilized crosslinkable polyolefin  
compositions comprising acidic silanol condensation catalysts. Nylander,  
Perry (Borealis Technology Oy, Finland). Eur. Pat. Appl. EP 2072568 A1  
20090624, 17pp.; Chemical Indexing Equivalent to 151:79136 (WO)  
DESIGNATED STATES: R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

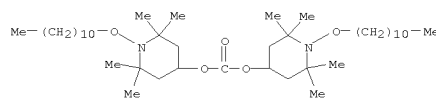
GB,

GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,  
TR, AL, BA, HR, MK, RS. (English). CODEN: EPXXDW. APPLICATION: EP  
2007-24836 20071220.

AB A polyolefin composition comprises a crosslinkable polyolefin with  
hydrolyzable silane groups, and a silanol condensation catalyst, wherein the  
composition is characterized by excellent curing properties, namely, the maximum torque  
 $\Delta F$  is  $> 40$  Nm and the crosslinking speed is  $> 0.1$  Nm/s in the ice  
test, and retention of  $> 60\%$  of the elongation at break after 500 h in  
SEFAP UV exposure. Preferably, the polyolefin composition further  
comprises at least one UV stabilizer that is acidic ( $pH \leq 6.2$ , measured at  
20-25° in 1% suspension). The polyolefin composition can be used for  
production of tubes and insulating layers for elec. wires and cables.

IT

705257-84-7, ADK Stab LA 81  
RL: MOA (Modifier or additive use); USES (Uses)  
(ADK Stab LA 81; UV stabilized crosslinkable polyolefin compns.  
comprising acidic silanol condensation catalysts)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
INDEX NAME)



L4 ANSWER 12 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2009:655567 Document No. 151:57243 Compound polymerization inhibitor and  
its application. Zhang, Tianlin; Liu, Lin; Zhou, Jiexing (Huailai Institute  
of Technology, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai  
Shuomingshu CN 101440286 A 20090527, 6pp. (Chinese). CODEN: CNXKEV.

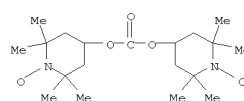
APPLICATION: CN 2010-176117 20081103.  
AB The title polymerization inhibitor comprises components A, B and C at a  
mass ratio of (10-50):(20-80):(30-70). Component A comprises  
tris(1-oxy-2,2,6,6-tetramethylpiperidine-4-oxy)phosphorite (TMPP),  
bis(1-oxy-2,2,6,6-tetramethylpiperidine-4-oxy)carbonate (BTMPC) and  
(1-oxy-2,2,6,6-tetramethylpiperidine-4-oxy)

IT

1-oxy-2,2,6,6-tetramethylpiperidine-4-oxyacetate (DTMPE). Component B  
comprises 4,6-dinitro-2-sec-Bu phenol (DNBP), 4,6-dinitro p-cresol (DNPC)  
and 4,6-dinitro-o-cresol (DNOC). Component C comprises  
3,5-dimethylthio-2,4-diamino toluene,  
3,5-dimethylthio-2,6-diaminotoluene,  
2,6-dimethylthio-1,4-diaminobenzene and  
4,6-dimethylthio-1,3-diaminobenzene. The invented polymerization  
inhibitor is liquid at low temperature, and used in production or purification of  
styrene, divinylbenzene, p-chloromethyl styrene, 2-vinyl pyridine, 4-vinyl  
pyridine, polyol acrylate, etc.

IT

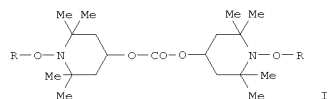
6146-58-3  
RL: CAT (Catalyst use); USES (Uses)  
(compound polymerization inhibitors)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



10591533.trn

L4 ANSWER 13 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:618497 Document No. 150:5651580 Resin composition and resin molded article with good weather resistance. Mizokawa, Shigeo; Negishi, Yoshinori (Adeka Corporation, Japan). PCT Int. Appl. WO 2009063708 A1 20090522, 24pp.; Chemical Indexing Equivalent to 150:565321 (JP)  
 DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BM, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LB, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD, TG, TR. (Japanese).  
 CODEN: PIXXD2. APPLICATION: WO 2008-JP68293 20081008. PRIORITY: JP 2007-296312 20071115.

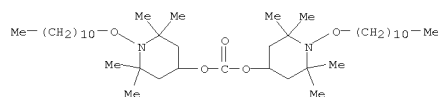
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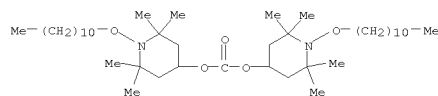
AB Disclosed is a resin composition containing zinc sulfide and having excellent weather resistance. Also disclosed is a resin molded article obtained by using such a resin composition. Specifically disclosed is a resin composition obtained by blending 0.1-20 parts by weight of zinc sulfide (A) and 0.01-20 parts by weight of a hindered amine compound (B) having a structure represented by the general formula I (R independently representing an alkyl group having 1-18 carbon atoms which may be substituted by a hydroxyl group, an acyl group having 1-18 carbon atoms, or a cycloalkyl group having 5-8 carbon atoms), per 100 parts by weight of a resin.

IT 705257-84-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (resin composition and resin molded article with good weather resistance)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)

L4 ANSWER 13 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

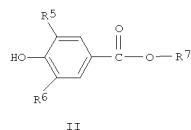
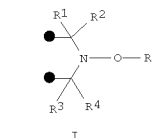


L4 ANSWER 14 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 INDEX NAME)



L4 ANSWER 14 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:583530 Document No. 150:540727 Synthetic resin composition useful for automotive interior/exterior material. Mizokawa, Shigeo; Negishi, Yoshinori (Adeka Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2009102556 A 20090514, 18pp.; Chemical Indexing Equivalent to 150:473711 (WO) (Japanese). CODEN: JKKXAF. APPLICATION: JP 2007-277139 20071025.

GI



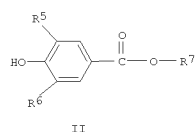
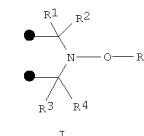
AB The composition, having good weather resistance, contains 100 parts synthetic resin, 0.01-20 parts a hindered amine compound (A) having a partial structure represented by a general formula I, and 0.01-20 parts a benzoate compound (B) represented by a general formula II, wherein R1-R4 = C1-4 alkyl, R = optionally hydroxy-substituted C1-18 alkyl, or C5-8 cycloalkyl;  
 R5, R6 = C1-8 alkyl, R7 = C1-30 alkyl, C6-30 aryl, C7-30 alkyl, C7-30 dialkyl aryl, C7-30 trialkyl aryl, or C7-30 aryl alkyl; and the ratio of A/B is 1:1-1:5. Thus, ethylene-propylene copolymer 85, talc 15, gray pigment 3.0, pentaerythritol 3-(4-hydroxy-3,5-di-tert-butylphenyl)propionate 0.1, tris(2,4-di-tert-butylphenyl) phosphite 0.1, calcium stearate 0.1, 1-undecyloxy-2,2,6,6-tetramethyl-4-piperidinol carbonate 0.1, and hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate 0.1 parts were kneaded at 230° to give a title composition

IT 705257-84-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (synthetic resin composition useful for automotive interior/exterior material)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)

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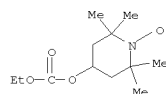
L4 ANSWER 15 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:519143 Document No. 150:4737110 Synthetic resin composition useful for  
 automotive interior/exterior material. Mizokawa, Shigeo; Negishi,  
 Yoshinori (Adeka Corporation, Japan). PCT Int. Appl. WO 2009054267 A1  
 20090430, 26pp.; Chemical Indexing Equivalent to 150:540727 (JP)  
 DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH,  
 BR,  
 BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM,  
 KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN,  
 MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC,  
 SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT; RW: AT, BE, BF,  
 BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT,  
 LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD, TG, TR. (Japanese).  
 CODEN: PIXXD2. APPLICATION: WO 2008-JP68289 20081008. PRIORITY: JP  
 2007-277139 20071025.

GI

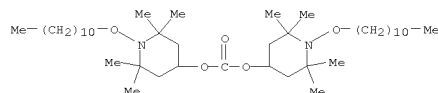


AB The composition, having good weather resistance, contains 100 parts  
 synthetic  
 resin, 0.01-20 parts a hindered amine compound (A) having a partial  
 structure represented by a general formula I, and 0.01-20 parts a  
 benzoate  
 compound (B) represented by a general formula II, wherein R1-R4 = C1-4  
 alkyl, R = optionally hydroxy-substituted C1-8 alkyl, or C5-8 cycloalkyl;  
 R5, R6 = C1-8 alkyl, R7 = C1-30 alkyl, C6-30 aryl, C7-30 alkyl, C7-30  
 dialkyl aryl, C7-30 trialkyl aryl, or C7-30 aryl alkyl; and the ratio of  
 A/B is 1:1-1:5. Thus, ethylene-propylene copolymer 85, talc 15, gray  
 pigment 3.0, pentaerythritol 3-(4-hydroxy-3,5-di-tert-  
 butylphenyl)propionate 0.1, tris(2,4-di-tert-butylphenyl) phosphite 0.1,

L4 ANSWER 16 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2009:426827 Document No. 150:4271930 Dye-sensitized solar cell containing  
 nitroxyl radical compound in electrolyte layer. Nanbu, Yoko (Adeka Co.,  
 Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2009076369 A 20090409, 14pp.  
 (Japanese). CODEN: JKKXAF. APPLICATION: JP 2007-245519 20070921.  
 AB In the dye-sensitized solar cell having an electrode substrate, a  
 transparent conductive layer, a dye-adsorbed metal oxide layer, an  
 electrolyte layer, another transparent conductive layer, and a  
 counterelectrode in this order, the electrolyte layer contains nitroxyl  
 radical compound (acting as redox mediator). The solar cell has improved  
 electromotive force, maximum output, and cycle performance.  
 IT 289499-43-0  
 RL: CAT (Catalyst use); USES (Uses)  
 (redox mediators; dye-sensitized solar cell containing nitroxyl radical  
 compound in electrolyte layer)  
 RN 289499-43-0 CAPLUS  
 CN 1-Piperidinyl, 4-[(ethoxycarbonyl)oxy]-2,2,6,6-tetramethyl- (CA INDEX  
 NAME)

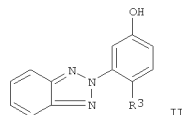
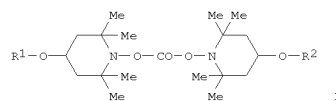


L4 ANSWER 15 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 calcium stearate 0.1, 1-undecyloxy-2,2,6,6-tetramethyl-4-piperidinol  
 carbonate 0.1, and hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate 0.1  
 parts  
 were kneaded at 230° to give a title compn.  
 IT 705257-84-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (synthetic resin composition useful for automotive interior/exterior  
 material)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
 INDEX NAME)



L4 ANSWER 17 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2008:1179870 Document No. 149:4033500 Vinyl chloride polymer waterproof  
 sheet with good weather resistance. Mitsudera, Taro; Sengoku, Tadashi;  
 Yonezawa, Yutaka (Adeka Corporation, Japan). PCT Int. Appl. WO  
 2008117575  
 A1 20081002, 20 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AO, AT, AU,  
 AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK,  
 DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID,  
 IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY,  
 MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,  
 PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,  
 TT, TZ; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR,  
 GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, MT, NE, NL, NO, PT, SE, SN, TD,  
 TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2008-JP52240  
 20080212. PRIORITY: JP 2007-80780 20070327.

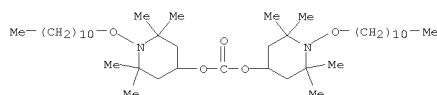
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AB The waterproof sheet is made of a vinyl chloride resin composition  
 comprising  
 (A) 100 parts a vinyl chloride resin, (B) 5-100 parts a plasticizer, (C)  
 0.05-5 parts a hindered amine compound I (R1, R2 = C4-20 alkyl, C5-6  
 cycloalkyl), and (D) 0.05-5 parts a benzotriazole UV absorber II (R3 =  
 C1-12 alkyl).  
 IT 705257-84-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (vinyl chloride polymer waterproof sheet with good weather resistance)  
 RN 705257-84-7 CAPLUS  
 CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
 INDEX NAME)

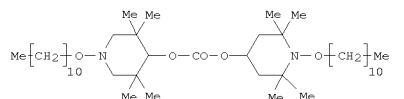
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L4 ANSWER 17 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

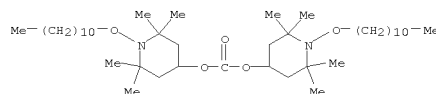


L4 ANSWER 18 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2008:1069425 Document No. 149:3332270 Hindered alkoxyamine-containing  
acidic  
polymer compositions with long-lasting weather resistance. Negishi,  
Yoshinori; Dobugawa, Shigeo (Adeka Co., Ltd., Japan). Jpn. Kokai Tokkyo  
Koho JP 2008202005 A 20080904, 11pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 2007-42883 20070222.

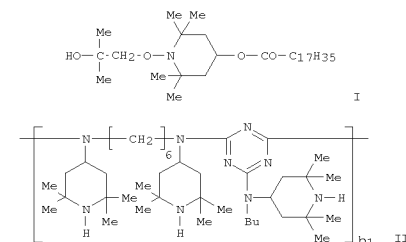
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AB Title compns., useful for agricultural films, etc., contain 100 parts  
acid  
group-containing polymers and 0.005-30 parts hindered amines having  
partial  
structures CH2CR1R2N(OR)CR3R4CH2 [R1-4 = C1-4 lower alkyl; R = C1-18  
alkyl  
(substituted with OH), C5-8 cycloalkyl]. Thus, a composition comprising  
block  
polypropylene 95, Youmex 1001 (maleated polypropylene) 5, Ca stearate  
0.05, tetrakis[3-(3,5-di-tert-butyl-4-  
hydroxyphenyl)propionyloxymethyl]methane 0.1,  
tris(2,4-di-tert-butylphenyl) phosphite 0.1, and I 0.2 part was  
injection-molded to give a test piece showing initial yellowness index  
23.0 and cracking time 1104 h in a sunshine weathering test (83°,  
no raining).  
IT 705257-84-7  
RL: MCA (Modifier or additive use); PRP (Properties); USES (Uses)  
(stabilizer; hindered alkoxyamine-containing acidic polymer compns.)  
with  
long-lasting weather resistance)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
INDEX NAME)

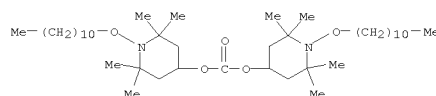


L4 ANSWER 19 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2008:801631 Document No. 149:1303690 Multifilament, monofilament, nonwoven  
or tape containing hindered amines as light stabilizers. Mueller,  
Daniel;  
Pauquet, Jean-Roch; Judge, Anthony; Meyer, Hanspeter (Ciba Holding Inc.,  
Switz.). PCT Int. Appl. WO 2008077830 A2 20080703, 55pp. DESIGNATED  
STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB,  
GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,  
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX,  
MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE,  
SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ; RW: AT, BE, BF, BJ, CF,  
CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC,  
ML, MR, MT, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.  
APPLICATION: WO 2007-EP64023 20071217. PRIORITY: EP 2006-127222  
20061227.  
GI



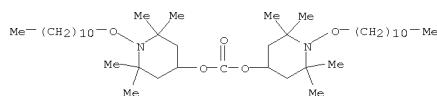
AB A multifilament, a monofilament, a non-woven or a tape, each having 1 -  
2000 Denier per filament and a draw ratio of 1:2 - 1:11 and each made of  
a  
composition containing the components (A) a polyolefin, (B) 2 hindered  
amines,  
e.g., I and II (b1 = 2-20), and optionally (C) one or more inorg. and/or  
organic pigments.  
IT 705257-84-7  
RL: MCA (Modifier or additive use); USES (Uses)  
(light stabilizer; manufacture of multifilament, monofilament,  
nonwoven or  
tape containing hindered amine additives)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA  
INDEX NAME)

L4 ANSWER 19 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

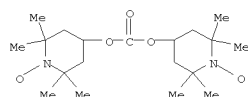


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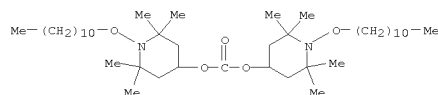
L4 ANSWER 20 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2008:371532 Document No. 151:338217 Superior light stabilization using a novel hindered amine light stabilizer. Negishi, Yoshinori; Kawamoto, Naoshi; Yukino, Toshinori (Polymer Additives R&D Laboratory, ADEKA Corporation, 5-2-13, Shirahata, Minami-ku, Saitama City, Saitama, 336-0022, Japan). Addcon World 2007, International Plastics Additives and Compounding Conference, 13th, Frankfurt, Germany, Sept. 5-6, 2007, 9/1-9/8. Smithers Rapra Technology Ltd.: Shrewsbury, UK. ISBN: 978-1-84735-018-3 (English) 2007. CODEN: 69RMT6.  
AB The degradation of agricultural films made of polyethylene stabilized with hindered amine light stabilizer ADK Stab LA 81 and a conventional antioxidant package was investigated. The HALS showed excellent light stabilizing activity under acidic conditions of sulfur fumigation and sulfurous acid treatment.  
IT 705257-84-7, ADK Stab LA 81  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilization of polyethylene with hindered amine light stabilizers)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)



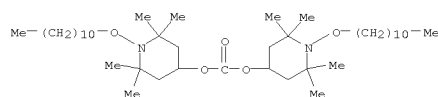
L4 ANSWER 22 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2007:1173851 Document No. 147:450127 Rubber compositions with good processability and their pneumatic tires. Negishi, Yoshinori; Ayabe, Takashi; Tobita, Etsuo; Takeuchi, Takashi (Adeka Co., Ltd., Japan). Jpn. Kokai Tokyo Koho JP 2007269911 A 20071018, 10pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 2006-95351 20060330.  
AB Title compns. contain 100 parts rubber and 0.01-20 parts bis(1-oxy-2,2,6,6-tetramethylpiperidin-4-yl) carbonate (I). Thus, 4-hydroxy-1-oxy-2,2,6,6-tetramethylpiperidine was reacted with di-Me carbonate in the presence of NaOMe to give I. A composition containing 100 parts natural rubber, 1 part I, 50 parts C black, 3 parts Zn flower, 2 parts stearic acid, and 1 part antioxidant showed Mooney viscosity 58, 60, and 64 after kneading for 3 min, 5 min, and 7 min, resp.  
IT 6146-58-3P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(bis(oxytetramethylpiperidinyl) carbonate-containing rubber compns. with good processability for pneumatic tires)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA INDEX NAME)



L4 ANSWER 21 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2008:43139 Document No. 148:1446540 Process for the preparation of sterically hindered nitroxyl ethers. Schoening, Kai-Uwe; Fischer, Walter; Basbas, Abdel-Ilah; Dichtl, Alexander (Ciba Specialty Chemicals Holding Inc., Switz.). PCT Int. Appl. WO 2008003602 A1 20080110, 70 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GR, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, MT, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2007-EP56292 20070625. PRIORITY: EP 2006-116619 20060705; EP 2007-102895 20070222.  
AB The invention relates to a process for the preparation of a sterically hindered nitroxyl ether from the corresponding sterically hindered nitroxyl radical by reacting it with a carbonyl compound and a hydroperoxide. The compds. prepared by this process are effective stabilizers for polymers against harmful effects of light, oxygen and/or heat, as flame-retardants for polymers and as polymerization regulators. Several nitroxyl radicals underwent alkylation with carbonyl compds. in the presence of a metal catalyst and hydroperoxide to give the corresponding nitroxyl ethers.  
IT 705257-84-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of hindered nitroxyl ethers via radical alkylation of nitroxyl radical with carbonyl compds. in the presence of hydroperoxide)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)



L4 ANSWER 23 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2007:1152194 Document No. 151:9581 Highly functional light stabilizer for polyolefin. Ayabe, Takashi (Lab. for Resin Additive, ADEKA Co., Ltd., 5-2-13 Shirohata, Minami-ku, Saitama-shi, 336-0022, Japan). Purasuchikkusu, 58(9), 40-41 (Japanese) 2007. CODEN: PRSKAW. ISSN: 0555-7887. Publisher: Kogyo Chosakai.  
AB The author has discussed on agricultural films which have high UV stability, particularly polyolefin films, more particularly polyethylene films, using specific highly functional light stabilizer such as ADK Stab LA 81 manufactured by Asahi Denka. The paper has indicated that the light stabilizer (ADK Stab LA 81) has low basicity and therefore shows high light stability compared to conventional light stabilizers such as HALS.  
IT 705257-84-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(highly functional light stabilizer for polyolefin)  
RN 705257-84-7 CAPLUS  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)



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L4 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2007:941788 Document No. 147:277280 Preparation of Phosphonium salts derivatives and their use in organic synthesis. Charette, Andre; Poupon, Jean-Christophe; Boezio, Alessandro (Valorisation-Recherche, Can.).

U.S. Pat. Appl. Publ. US 20070197477 A1 20070823, 33pp., Cont.-in-part of Appl. No. PCT/CA05/000523. (English). CODEN: USXXCO. APPLICATION: US 2006-539075 20061005. PRIORITY: US 2004-560592P 20040409; WO 2005-CA523 20050406.

AB Title compds. are prepared and their use in organic synthesis is described.

Thus, reaction of (3-diphenylphosphinophenyl)triphenylphosphonium bromide (preparation given) with LiClO<sub>4</sub> in MeCN gave 95% [(Ph<sub>2</sub>PC<sub>6</sub>H<sub>4</sub>)PPh<sub>3</sub>]+ClO<sub>4</sub>- which was used as reagent for Mitsunobu coupling reaction of menthol with 4-nitrobenzoic acid.

IT 867023-62-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of phosphonium salts derivs. and their use as reagent in organic synthesis)

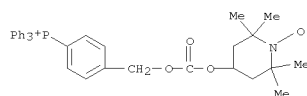
RN 867023-62-9 CAPLUS  
CN 1-Piperidinyl oxy, 2,2,6,6-tetramethyl-4-[[[4-(triphenylphosphonio)phenyl]methoxy]carbonyl]oxy]-, perchlorate (1:1)

(CA INDEX NAME)

CM 1

CRN 867023-61-8

CMF C35 H38 N O4 P



CM 2

CRN 14797-73-0

CMF C1 O4

L4 ANSWER 25 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2007:729700 Document No. 147:118641 Nitroxyl compound, and polymerization inhibitor and polymerization inhibitor composition using same. Negishi, Yoshimori; Tobita, Etsuo; Ayabe, Takashi (Adeka Corporation, Japan). PCT Int. Appl. WO 2007074613 A1 20070705, 21pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2006-JP324377 20061206. PRIORITY: JP 2005-375673 20051227.

AB Disclosed is a compound having low volatility, high nitroxyl group concentration and excellent polymerization inhibitory activity. Also disclosed are a polymerization inhibitor and polymerization inhibitor composition using such a compound. Specifically disclosed are a nitroxyl compound represented by the formula (I) below, and

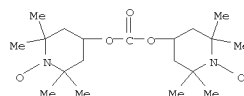
a polymerization inhibitor and polymerization inhibitor composition using such a nitroxyl compound, e.g. bis(4-hydroxy-2,2,6,6-tetramethylpiperidinooxy) carbonate.

IT 6146-58-3P  
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(nitroxyl compound, and polymerization inhibitor and polymerization inhibitor composition using same)

RN 6146-58-3 CAPLUS

CN 1-Piperidinyl oxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA INDEX NAME)



L4 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



IT 867023-64-1P  
RL: RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

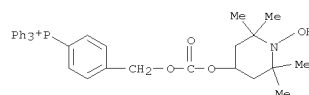
(preparation of phosphonium salts derivs. and their use as reagent in organic synthesis)

RN 867023-64-1 CAPLUS  
CN Phosphonium, [4-[[[[(1-hydroxy-2,2,6,6-tetramethyl-4-piperidinyl)oxy]carbonyl]oxy]methyl]phenyl]triphenyl-, perchlorate (1:1) (CA INDEX NAME)

CM 1

CRN 867023-63-0

CMF C35 H39 N O4 P



CM 2

CRN 14797-73-0

CMF C1 O4



L4 ANSWER 26 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2007:402380 Document No. 146:4225020 Piperidyl group-containing arene monomers, their (co)polymers with high NO content, and preparation thereof. Nanbu, Yoko; Taki, Takayuki (Adeka Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2007091811 A 20070412, 25pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 2005-280285 20050927.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title monomers are represented by I or II (R, R1 = O-liberating group, carbamoyloxy), and are polymerized at -5-30° (in the presence of Ni complex catalysts) to afford the title polymers having unit III or IV (R2-R4 = O-liberating group, carbamoyloxy; m, k = 1-100; n = 0-100). The polymers are useful for light stabilizers, conductivity-imparting agents, battery

electrode materials, etc. Thus, 4-hydroxy-2,2,6,6-tetramethyl-1-piperidinyl oxy was reacted with 5.11 g NaH in THF and then with 16.58 g propargyl bromide in THF to give 4-propargyloxy-2,2,6,6-tetramethyl-1-piperidinyl oxy, which was then reacted with t-BuOK in DMSO at 35° to give 4-allyloxy-2,2,6,6-tetramethyl-1-piperidinyl oxy (V) in 90.0% yield. Then, V was polymerized in the presence of [(π-allyl)NiOCOCF<sub>3</sub>]<sub>2</sub>/PPh<sub>3</sub> (prepared from dicyclopentadienylnickel and allyl triflate) at 25° to give a polymer (redox behavior given) with Mn 21,750 in 71.4% yield.

IT 934214-95-6P

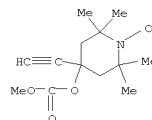
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent) (piperidyl-containing arene monomers forming nitrosyl-rich polymers useful

for light stabilizers or conductors)

RN 934214-95-6 CAPLUS

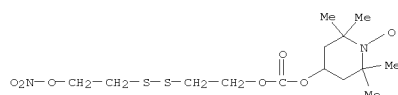
CN 1-Piperidinyl oxy, 4-ethynyl-4-[(methoxycarbonyl)oxy]-2,2,6,6-tetramethyl- (CA INDEX NAME)





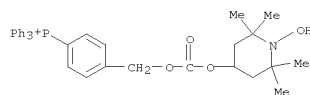
10591533.trn

L4 ANSWER 27 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2006:191976 Document No. 144:2737550 Preparation of prodrugs containing novel biocleavable linkers. Satyam, Apparao (Nicholas Piramal India Ltd., India). U.S. Pat. Appl. Publ. US 20060046967 A1 20060302, 181 pp. (English). CODEN: USXXCO. APPLICATION: US 2005-213396 20050826. PRIORITY: US 2004-604632P 20040826; IN 2005-MU779 20050701.  
 AB The invention provides compds. D1-L1-E-A-B-A1-E-(L-E-A1-B-A-E)0-2-L2-D2 [B is a bond, (CH2)1-6, (CH2CH2O)1-1000, S-S, S-S:O, S-SO2 or S-S:NH; A, Al are independently a bond, (CH2)1-8, 1,2-, 1,3- or 1,4-phenylene; D1 is a therapeutic agent having one or more functional groups OH, SH, NHRI, CO2H, CONHRI, O2CNHRI, SO2NHRI, SO2NHRI, NR1CONHNHRI or NR1SO2NHRI (R1 is H, alkyl, aryl, etc.); D2 is D1, a peptide, protein, monoclonal antibody, vitamin, NO, NO2, NONOate, a nitric oxide-releasing group, a polymer, etc.; E is independently CH2 or a bond; L1, L2 are independently a bond, O, S, NR1, L, or a linkage] or their pharmaceutically-acceptable salts for use as prodrugs, including NO-releasing prodrugs. Thus, aspirin prodrug 2-AcOCH4CONHCH2CH2SSCH2CH2ONO2 was prepared and shown to release salicylate in rats in a sustained and controlled manner starting from 1 h through 12 h.  
 IT 877865-31-1P  
 RI: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of prodrugs containing novel biocleavable linkers)  
 RN 877865-31-1 CAPLUS  
 CN 1-Piperidinyl, 2,2,6,6-tetramethyl-4-[[[2-[[2-(nitrooxy)ethyl]dithio]ethoxy]carbonyl]oxy]- (CA INDEX NAME)



L4 ANSWER 28 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 CM 2  
 CRN 14797-73-0  
 CMF C1 O4  

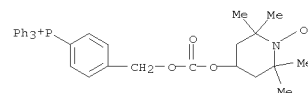
$$\text{O}=\text{C}=\text{Cl}-\text{O}-$$
  
 IT 867023-64-1P  
 RI: RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of phosphonium salts derivs. and their use as solubility controlling auxiliaries)  
 RN 867023-64-1 CAPLUS  
 CN Phosphonium, [4-[[[(1-hydroxy-2,2,6,6-tetramethyl-4-piperidinyl)oxy]carbonyl]oxy]methyl]phenyl]triphenyl-, perchlorate (1:1) (CA INDEX NAME)  
 CM 1  
 CRN 867023-63-0  
 CMF C35 H39 N O4 P



CM 2  
 CRN 14797-73-0  
 CMF C1 O4



L4 ANSWER 28 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2005:1130651 Document No. 143:4060110 Phosphonium salts derivatives and their use as solubility controlling auxiliaries. Charette, Andre; Poupon, Jean-Christophe; Boezio, Alessandro (Valorisation-Recherche, Societe en Commandite, Can.). PCT Int. Appl. WO 2005097812 A1 20051020, 101 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2005-CA523 20050406. PRIORITY: US 2004-560592P 20040409.  
 AB The present invention relates to the use of compds. A3P or [A3P+L1]X- (A = various (un)substituted groups such as furyl, Ph, pyridyl, naphthyl, or thiophenyl; X = anion; L1 = a linker, as solubility controlling auxiliaries). Thus, preparation of [3-Ph3P+C6H4PPH2]ClO4- is described in several steps starting from 1,3-dibromobenzene, and was used as reagent for Mitsunobu reaction of menthol with p-nitrobenzoic acid. These compds. can also be used as solubility controlling fragments of a mol. The invention also relates to various methods of controlling the solubility of a mol. or a substrate. Moreover, the invention also relates to various phosphonium supported reagents or various phosphonium salts derivs.  
 IT 867023-62-9P  
 RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of phosphonium salts derivs. and their use as solubility controlling auxiliaries)  
 RN 867023-62-9 CAPLUS  
 CN 1-Piperidinyl, 2,2,6,6-tetramethyl-4-[[[4-(triphenylphosphonio)phenyl]methoxy]carbonyl]oxy]-, perchlorate (1:1) (CA INDEX NAME)  
 CM 1  
 CRN 867023-61-8  
 CMF C35 H38 N O4 P

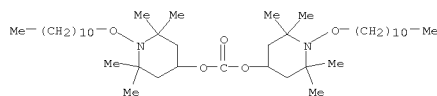


L4 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2005:977018 Document No. 143:2872080 Weakly basic hindered amines having carbonate skeletons for synthetic resin compositions and coating compositions with good long term stability and acid rain and chemical resistance. Negishi, Yoshinori; Ayabe, Takashi; Tobita, Etsuo (Asahi Denka Co., Ltd., Japan). PCT Int. Appl. WO 2005082852 A1 20050909, 39  
 PP. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2005-JP3807 20050228. PRIORITY: JP 2004-57297 20040302.  
 GI

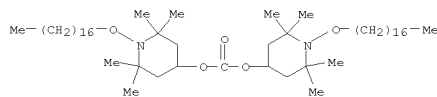
AB The present invention relates to hindered amines I, wherein R = C1-30 (hydroxy)alkyl or C2-30 alkenyl; n = 1-4 integer; R1 = C1-22 alkyl, C2-22 alkenyl, or II when n = 1; R1 = C2-20 n-valent organic group when n = 2-4. Thus, 98.1 mmol 4-hydroxy-1-oxy-2,2,6,6-tetramethylpiperidine and 78.5 mmol dilauroyl peroxide were reacted for 6 h, 53.9 g 7.3% aqueous sodium hydroxide solution and 25 g methanol was added into the resulting reaction mixture to remove lauric acid, filtered, evaporated, 0.57 g sodium hydroborate and reacted to remove 1-undecanoxy-2,2,6,6-tetramethylpiperidin-4-one to give 4-hydroxy-1-undecanoxy-2,2,6,6-tetramethylpiperidine, 12.0 g of which was reacted with 4.19 g diphenylcarbonate at 170-180° in the presence of potassium carbonate for 8 h to give bis(1-undecanoxy-2,2,6,6-tetramethylpiperidin-4-yl)carbonate, 0.5 parts of which was mixed with PES 120 (LLDPE) 100, calcium stearate 0.05, tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl)methane 0.05, and tris(2,4-d-tert-butylphenyl)phosphite 0.05 parts, kneaded, pelletized, and pressed to give a film, showing good acid rain resistance.  
 IT 705257-84-7P 863984-48-9P  
 RI: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (preparation of weakly basic hindered amines having carbonate skeletons for synthetic resin compns. and coating compns. with good long term stability and acid rain and chemical resistance)  
 RN 705257-84-7 CAPLUS

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L4 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
CN 4-Piperidinol, 2,2,6,6-tetramethyl-1-(undecyloxy)-, 4,4'-carbonate (CA INDEX NAME)

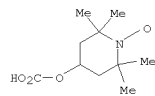


RN 863984-48-9 CAPLUS  
CN 4-Piperidinol, 1-(heptadecyloxy)-2,2,6,6-tetramethyl-, carbonate (2:1 ester) (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
CM 1

CRN 861804-73-1  
CMF C10 H18 N O4



CM 2

CRN 9005-80-5  
CMF Unspecified  
CCI FMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L4 ANSWER 30 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2005:696785 Document No. 143:194667 Magnetic therapeutic nanoparticles comprising polymer-encapsulated superparamagnetic core and bioactive agents. Barry, Stephen E.; Sunderland, Christopher J.; Goodwin, Andrew A.

(Alnis Biosciences, Inc., USA). PCT Int. Appl. WO 2005070471 A2  
20050804,  
40 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG,  
BR,

BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2005-US1755 20050120. PRIORITY: US 2004-537500P 20040120;

US 2004-616390P 20041006.

AB A magnetic therapeutic nanoparticle comprises a plurality of bioactive agents, a core of superparamagnetic material, and a polymeric encapsulant.

The magnetic therapeutic nanoparticles may be used for targeted bioactive agent delivery. A plurality of bioactive agent-containing magnetic therapeutic nanoparticles may be administered to the environment to be treated, and an encapsulated bioactive agent is released by application

of sufficient amount of heat. Thus, iron pentacarbonyl (0.74 mL) was added to

a mixture of oleic acid (4.9 g) in octyl ether (28 mL) at 100° under N<sub>2</sub>, the solution was heated to 290° over 1 h, held at this temperature until

it turned black, heated for further 30 min, and the mixture was cooled to room temperature. Trimethylamine oxide (1.26 g) was added to the reaction mixture,

the mixture was heated to 130° over 20 min, held at this temperature for 2 h, heated to 290° over 1 h, and held at this temperature for 1 h. Washed and filtered product comprised oleic acid-stabilized maghemite nanoparticles (10 nm) which were exchanged with a tetraalkylammonium hydroxide, and reacted with ethylene oxide-methacrylic acid diblock copolymer, and cis-diamminedinitratoplatinum to obtain polymer-encapsulated magnetic therapeutic nanoparticles containing 4-6%

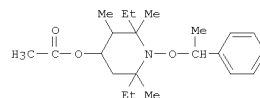
of platinum as a bioactive agent.

IT 861804-74-2DP, reaction products with poly(ethylene glycol) diacrylate-sodium acrylate copolymer  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(nanoparticles coated with; magnetic therapeutic nanoparticles comprising polymer-encapsulated superparamagnetic core and bioactive agents)

RN 861804-74-2 CAPLUS  
CN Inulin, 2,2,6,6-tetramethyl-1-oxy-4-piperidinyl carbonate (9CI) (CA INDEX NAME)

L4 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2001:712815 Document No. 135:2733550 Manufacture of 2,6-diethyl-2,3,6-trimethyl- and 2,2-diethyl-6,6-dimethyl-1-alkoxy-piperidinyl carboxylate esters and carboxamides as radical polymerization initiators. Mesvada, Peter; Zink, Marie-Odile; Kramer, Andreas (Ciba Specialty Chemicals Holding Inc., Switz.). Ger. Offen. DE 10113209 A1 20010927, 48 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2001-10113209 20010319. PRIORITY: EP 2000-810246 20000322.

GI



II

AB 2,2-Diethyl-6,6-dimethyl-1-alkoxy-piperidinyl carboxylate esters and carboxamides [I; R = COR<sub>1</sub>, O<sub>2</sub>CNHR<sub>1</sub>, NR<sub>2</sub>COR<sub>1</sub>, R<sub>2</sub>NCNHR<sub>1</sub>, OCR<sub>1</sub>NCOR<sub>3</sub>; R<sub>1</sub> = H,

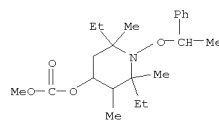
CO<sub>2</sub>H, CO<sub>2</sub> (C<sub>1</sub>-4 alkyl), CO<sub>2</sub>Ph, C<sub>2</sub>-18 alkyl, C<sub>2</sub>-4 alkenyl, etc.; R<sub>2</sub>, R<sub>3</sub> = H, C<sub>1</sub>-18 alkyl; R<sub>1</sub>R<sub>3</sub> with an N atom can form (un)saturated, (benzo-fused) 5-membered ring; R<sub>4</sub> = CH<sub>2</sub>Ph, MeCHPh, Me<sub>2</sub>CPh, etc., with a proviso] are used as radical polymerization initiators for producing polymers with narrow mol.

weight distribution. Seven title compds. were prepared and approx. 221 claimed. For example, adding 1.57 of AcCl to a solution of 6.36 g 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)piperidin-1-ol and 2.02 g Et<sub>3</sub>N in 50 mL PhMe at 0-5° and stirring the mixture for 2 h at 20° gave 6.9 g of a title ester II. Dissolving 338 mg II in 8 g Bu acrylate and heating for 5 h at 145° under Ar gave 6.64 g Bu acrylate oligomer having number-average mol. weight 6700 and weight-average mol. weight 8700.

IT 362617-51-4 362617-52-5 362617-53-6  
362617-54-7 362618-68-6 362618-69-7  
362618-70-0 362618-71-1

RL: CAT (Catalyst use); USES (Uses)  
(manufacture of diethyltrimethyl- and diethyltrimethyl(alkoxy)piperidinyl carboxylate esters and carboxamides as radical polymerization initiators)

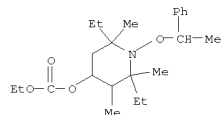
RN 362617-51-4 CAPLUS  
CN Carbonic acid, 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)-4-piperidinyl methyl ester (CA INDEX NAME)



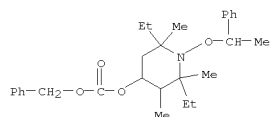
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L4 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

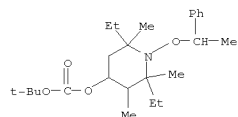
RN 362617-52-5 CAPLUS  
CN Carbonic acid, 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)-4-piperidinyl ethyl ester (CA INDEX NAME)



RN 362617-53-6 CAPLUS  
CN Carbonic acid, 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)-4-piperidinyl phenylmethyl ester (CA INDEX NAME)

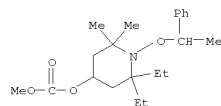


RN 362617-54-7 CAPLUS  
CN Carbonic acid, 2,6-diethyl-2,3,6-trimethyl-1-(1-phenylethoxy)-4-piperidinyl 1,1-dimethylethyl ester (CA INDEX NAME)

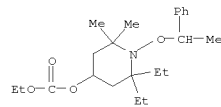


RN 362618-68-6 CAPLUS  
CN Carbonic acid, 2,2-diethyl-6,6-dimethyl-1-(1-phenylethoxy)-4-piperidinyl methyl ester (CA INDEX NAME)

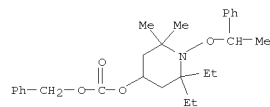
L4 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



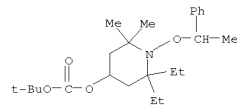
RN 362618-69-7 CAPLUS  
CN Carbonic acid, 2,2-diethyl-6,6-dimethyl-1-(1-phenylethoxy)-4-piperidinyl ethyl ester (CA INDEX NAME)



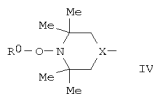
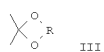
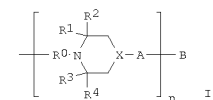
RN 362618-70-0 CAPLUS  
CN Carbonic acid, 2,2-diethyl-6,6-dimethyl-1-(1-phenylethoxy)-4-piperidinyl phenylmethyl ester (CA INDEX NAME)



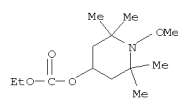
RN 362618-71-1 CAPLUS  
CN Carbonic acid, 2,2-diethyl-6,6-dimethyl-1-(1-phenylethoxy)-4-piperidinyl 1,1-dimethylethyl ester (CA INDEX NAME)



L4 ANSWER 32 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
2001:564135 Document No. 135:1250350 Fire-resistant electrolyte solutions and secondary nonaqueous electrolyte batteries. Yamada, Manabu; Kubota, Naohiro (Denso Co., Ltd., Japan; Asahi Denka Kogyo K. K.). Jpn. Kokai Tokkyo Koho JP 2001210365 A 20010803, 10 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 2000-22245 20000131.  
GI

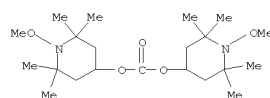


AB The electrolyte solns. contain an electrolyte salt dissolved in an organic solvent, which contains a piperidine derivative I, where R0 = C1-18 alkyl group; R1-4 = C1-4 alkyl groups; n = 1-6 integer; X = II or III; R = C2-10 alkenyl group, A = -O-, -NR5- or a single bond; R5 = C1-10 alkyl group; B = H or C1-10 alkyl group that may also have ether bonding, n-valent acyl group or carbamoyl group, -CO2(R6OCO)mR7 (R6 = C2-6 alkylene group, R7 = C1-10 alkyl group that may also have ether bonding, or IV, m = 0 or 1), or alkylene or oxydialkylene group connected to R5. The electrolyte solns. may also contain phosphate esters.  
IT 351331-30-1 351331-33-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(fire resistant additives for electrolyte solns. in secondary lithium batteries)  
RN 351331-30-1 CAPLUS  
CN Carbonic acid, ethyl 1-methoxy-2,2,6,6-tetramethyl-4-piperidinyl ester (CA INDEX NAME)



L4 ANSWER 32 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

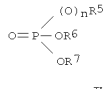
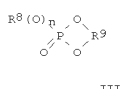
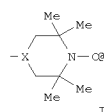
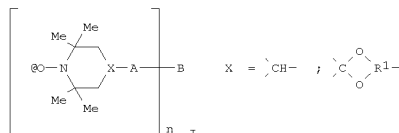
RN 351331-33-4 CAPLUS  
CN 4-Piperidinol, 1-methoxy-2,2,6,6-tetramethyl-, carbonate (2:1) (ester) (9CI) (CA INDEX NAME)



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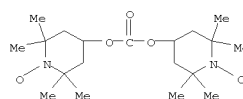
L4 ANSWER 33 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 2000:600579 Document No. 133:1960040 Fire-resistant electrolyte solutions  
 and secondary nonaqueous electrolyte batteries. Kubota, Naohiro;  
 Takeuchi, Yasunori (Asahi Denka Kogyo K. K., Japan). Jpn. Kokai Tokkyo  
 Koho JP 2000235867 A 20000829, 9 pp. (Japanese). CODEN: JKXXAF.  
 APPLICATION: JP 1999-36258 19990215.

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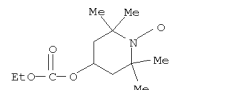


AB The electrolyte solns. contain electrolyte salts and organic solvents,  
 which includes N-oxy-2,2,6,6-tetramethyl-4-piperidine, preferably I [n = 1-6,  
 R1 = trivalent C2-10 alkane radical, A = -O-, -NR2- or a single bond, R2 =  
 C1-10 alkyl group, B = H or C1-10 alkyl group which may have ether  
 bonding, n valent acyl or carbamoyl group, or -COO-(R3OCO)NR4, R3 = C2-6  
 alkylene group, R4 = C1-10 alkyl group or II]. The electrolyte salt is  
 selected from LiPF6, LiBF4, LiClO4, CF3SO3Li, (CF3SO2)2NLi,  
 (CF3SO2)3CLi,  
 and the solvent may also contain III or IV (R5-8 = linear or branched  
 C1-4 (fluorinated) alkyl group, R9 = linear or branched C2-8 alkylene group, n  
 = 0 or 1).  
 IT 6146-58-3 289499-43-0  
 RL: DEV (Device component use); USES (Uses)  
 (electrolyte solvent mixts. containing  
 N-oxy-2,2,6,6-tetramethyl-4-piperidine derivs. and phosphorus compds.  
 for secondary lithium batteries)

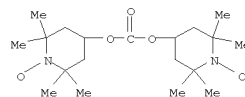
L4 ANSWER 34 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1996:640164 Document No. 126:46848 Original Reference No. 126:9229a,9232a  
 Organic radicals exhibiting intermolecular ferromagnetic interactions  
 with high probability: 4-arylmethyleneamino-2,2,6,6-tetramethylpiperidin-1-  
 yloxyis and related compounds. Togashi, Kensuke; Imachi, Ron; Tomioka,  
 Katsuyuki; Tsuboi, Hidenori; Ishida, Takayuki; Nogami, Takashi; Takeda,  
 Naoya; Ishikawa, Masayasu (Dep. Appl. Phys. Chem., Univ.  
 Electro-Communications, Chofu, 182, Japan). Bulletin of the Chemical  
 Society of Japan, 69(10), 2821-2830 (English) 1996. CODEN: BCSJAS.  
 ISSN: 0009-2673. Publisher: Nippon Kagakkai.  
 AB A series of 4-arylmethyleneamino-2,2,6,6-tetramethylpiperidin-1-yloxyis  
 (4-arylmethyleneamino-TEMPO) and related compds. were synthesized, and  
 their magnetic susceptibility were measured by a SQUID magnetometer in  
 the temperature range of 1.8-100 K. Of 165 radicals investigated, 52 kinds  
 of radicals exhibited intermol. ferromagnetic interactions. These were  
 confirmed by the increase of effective magnetic moments in  
 low-temperature regions. Pos. Weiss temps. (Θ), ranging from +0.03 to +0.75 K, were  
 found for these materials. Over 100 kinds of radicals exhibited  
 antiferromagnetic interactions with Θ ranging from -0.01 to -24 K.  
 The surprisingly high probability of finding organic radicals with  
 intermol. ferromagnetic interaction may be understood by the characteristic mol.  
 arrangements in the crystals. An oxygen atom of an NO radical site of a  
 piperidin-1-yloxy moiety is apt to locate near methyl- and/or  
 methylene-hydrogens of β-positions of the adjacent mols., and the  
 resultant spin polarization gives rise to parallel spin alignments of  
 nearest NO sites in the crystals. 4-(4-Iodophenylmethyleneamino)-TEMPO  
 exhibited a bulk ferromagnetic transition at 0.4 K. Six radicals  
 exhibited metamagnetic transitions at magnetic fields lower than 200 Oe  
 below 0.1 K.  
 IT 6146-58-3P  
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)  
 (4-arylmethyleneamino-2,2,6,6-tetramethylpiperidin-1-yloxyis and  
 related organic radicals having high probability of intermol.  
 ferromagnetic interactions)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



L4 ANSWER 33 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)  
 RN 289499-43-0 CAPLUS  
 CN 1-Piperidinyloxy, 4-[(ethoxycarbonyl)oxy]-2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

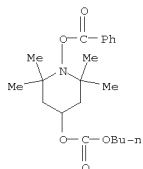


L4 ANSWER 35 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1995:364840 Document No. 122:213312 Original Reference No.  
 122:38991a,38994a  
 Spin catalysis of the radical recombination reaction. Buchachenko,  
 Anatoly L.; Ruban, Lyudmila V.; Step, Eugene N.; Turro, Nicholas J.  
 (Institute of Chemical Physics, Russian Academy of Sciences, Moscow,  
 117334, Russia). Chemical Physics Letters, 233(3), 315-18 (English)  
 1995.  
 CODEN: CHPLBC. ISSN: 0009-2614. Publisher: Elsevier.  
 AB Rate consts. of the recombination of alkyl radicals (cyanoisopropyl and  
 sec-phenethyl radicals) with nitroxide biradicals in dioxane and Et  
 benzene exceed rate consts. with 'parent' mono radicals by 10%-50%. The  
 difference in reactivity is attributed to spin catalysis of the  
 recombination reaction which occurs in the encounter pair of an alkyl  
 radical with one of the biradical termini by the second spin-carrying  
 terminus.  
 IT 6146-58-3  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (rate consts. of recombination of alkyl radicals with nitroxide  
 biradicals)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

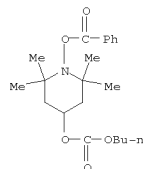


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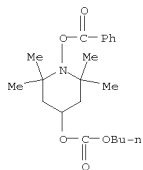
L4 ANSWER 36 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1993:8358 Document No. 118:83580 Original Reference No. 118:1703a,1706a  
 Light stabilizers for ambient cured coatings. Behrens, Rudolf A.; Mar, Andrew (Ciba-Geigy Corp., USA). U.S. US 5124378 A 19920623, 17 pp. Cont.-in-part of U.S. Ser. No. 99,420, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1988-259945 19881019. PRIORITY: US 1987-99420 19870921.  
 AB Derivs. of N-acyloxy or hydrocarboxy hindered piperidines of specified structure are light stabilizers for ambient-cured coatings, giving good durability and weather resistance. A tung oil-modified phenolic resin containing 5 phr bis(1-acetoxy-2,2,6,6-tetramethyl-4-piperidinyl) sebacate (I) gave coatings on red cedarwood with 60° gloss retention after 8 mo outdoor exposure 46.7%; vs. 24.2 without I, and 39.0 with bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate in place of I.  
 IT 137452-96-1  
 RL: USES (Uses)  
 (light stabilizers, for coatings)  
 RN 137452-96-1 CAPLUS  
 CN Carbonic acid, 1-(benzoyloxy)-2,2,6,6-tetramethyl-4-piperidinyl butyl ester (CA INDEX NAME)



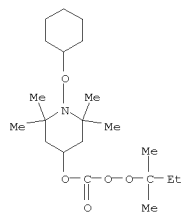
L4 ANSWER 37 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1992:512808 Document No. 117:1128080 Original Reference No. 117:19695a,19698a Polyolefin compositions stabilized with N-hydrocarbyl(carbonyl)oxy-substituted hindered amines. Galbo, James P.; Seltzer, Raymond; Ravichandran, Ramanathan; Patel, Ambelal R. (Ciba-Geigy Corp., USA). U.S. US 5096950 A 19920317, 18 pp. Cont.-in-part of U.S. Ser. No. 259,946, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1990-562783 19900806. PRIORITY: US 1988-259946 19881019.  
 AB The title stabilizers are especially useful in polyolefin films for greenhouses or swimming pool covers. Polypropylene containing a cinnamate stabilizer was mixed with 0.1% di(1-butylcarbomoyloxy-2,2,6,6-tetramethylpiperidin-4-yl)2,2-diethylmalonate (I), was extruded to a film, and exposed to light to give time to failure 890 h, vs. 340 without I.  
 IT 137452-96-1  
 RL: USES (Uses)  
 (stabilizers, to heat and light and oxygen, for polyolefins)  
 RN 137452-96-1 CAPLUS  
 CN Carbonic acid, 1-(benzoyloxy)-2,2,6,6-tetramethyl-4-piperidinyl butyl ester (CA INDEX NAME)



L4 ANSWER 38 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1991:657520 Document No. 115:2575200 Original Reference No. 115:43797a,43800a Polymers stabilized with N-substituted hindered amines.  
 Cortolano, Frank P.; Seltzer, Raymond; Patel, Ambelal R. (Ciba-Geigy Corp., USA). U.S. US 5004770 A 19910402, 19 pp. Cont.-in-part of U.S. Ser. No. 259,955, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1989-416621 19891003. PRIORITY: US 1988-259955 19881019.  
 AB Comps. bearing 2,2,6,6-tetraalkylpiperidine or -piperazine groups with the hindered N atom being substituted with OH or OR (R = organic) are useful as stabilizers for polymers other than polyolefins. A PVC plate containing 1% bis(1-methoxy-2,2,6,6-tetramethylpiperidin-4-yl) isophthalate (I), had AE value 2.8 (ASTM D-1925-63T) after exposing for 3014 h in a weatherometer, vs. 6.7 without I.  
 IT 137452-96-1  
 RL: USES (Uses)  
 (stabilizers, for polymers other than polyolefins)  
 RN 137452-96-1 CAPLUS  
 CN Carbonic acid, 1-(benzoyloxy)-2,2,6,6-tetramethyl-4-piperidinyl butyl ester (CA INDEX NAME)

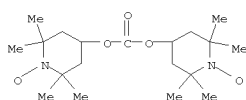


L4 ANSWER 39 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1991:82730 Document No. 114:827300 Original Reference No. 114:14149a,14152a Peroxides containing hindered amine moieties with low basicity as polymerization initiators. Seltzer, Raymond; Winter, Roland A. E.; Schirrmann, Peter J. (Ciba-Geigy A.-G., Switz.). Eur. Pat. Appl. EP 389423  
 A1 19900926, 19 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1990-810191 19900313. PRIORITY: US 1989-326353 19890321.  
 AB The title peroxides provide a polymer containing a hindered amine stabilizer chemical bonded to the polymer and the low basicity of the peroxides prevents interaction with acid catalysts used in some polymerization systems. Thus, Bu acrylate 25, 2-hydroxyethyl acrylate 30, Bu methacrylate 27, styrene 15, and acrylic acid 3% were polymerized with 6.5 g (based on 100 g monomer mixture) OO-tert-amyl-O-(1-cyclohexyloxy-2,2,6,6-tetramethylpiperidine-4-yl) monoperoxycarbonate gave a polymer containing a hindered amine stabilizer (I). Polypropylene containing 0.2% I was molded into test pieces exhibiting good failure resistance in a fluorescent sunlight/black light failure chamber.  
 IT 132147-26-3  
 RL: USES (Uses)  
 (polymerization initiators, for vinyl polymers containing hindered amine stabilizers)  
 RN 132147-26-3 CAPLUS  
 CN Carbonoperoxoic acid, O-[1-(cyclohexyloxy)-2,2,6,6-tetramethyl-4-piperidinyl] OO-(1,1-dimethylpropyl) ester (9CI) (CA INDEX NAME)



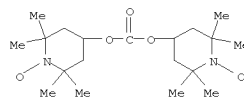
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L4 ANSWER 40 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1983;575125 Document No. 99:175125 Original Reference No. 99:26849a,26852a  
 Use of the ESR half-field transition to determine the interspin distance  
 and the orientation of the interspin vector in systems with two unpaired  
 electrons. Eaton, Sandra S.; More, Kundalika M.; Sawant, Bhinrao M.;  
 Eaton, Gareth R. (Dep. Chem., Univ. Colorado, Denver, CO, 80202, USA).  
 Journal of the American Chemical Society, 105(22), 6560-7 (English) 1983.  
 CODEN: JACSAT. ISSN: 0002-7863.  
 AB For systems containing 2 unpaired electrons with g values .apprx.2 and an  
 interspin distance of r, the intensity of the forbidden half-field  
 transition is proportional to r<sup>-6</sup>. The hyperfine splitting of the  
 half-field signal depends on the relative orientations of the nuclear  
 hyperfine tensors for the 2 electrons and the orientation of the  
 interspin  
 vector. Thus, the r value and the relative orientations of the hyperfine  
 tensors were determined independently, and also independently of the  
 value of  
 the exchange coupling constant J. The method was calibrated with 7 mols.  
 with well-characterized geometries: a Cu dimer, 4 dinitroxyl radicals and  
 2 spin-labeled Cu complexes. The absolute value of J for these mols.  
 ranged  
 from .apprx.100 to 25 + 10<sup>-4</sup> cm<sup>-1</sup>. Two 3-spin systems were examined  
 The method was also applied to a spin-labeled Cu complex for which the  
 Cu-nitroxyl distance could not have been obtained by other ESR methods.  
 IT 6146-58-3  
 RL: PRP (Properties)  
 (ESR half-field transition of, interspin vector in relation to)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

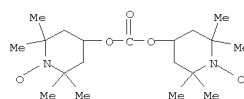


L4 ANSWER 41 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

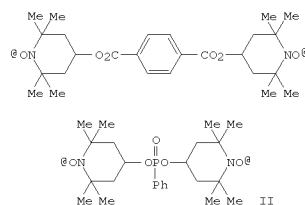
L4 ANSWER 41 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1982;519348 Document No. 97:119348 Original Reference No. 97:19657a,19660a  
 Metal-nitroxyl interactions. 23. Dinitroxyl adducts of paramagnetic  
 metal complexes. Sawant, Bhinrao M.; Eaton, Gareth R.; Eaton, Sandra S.  
 (Dep. Chem., Univ. Denver, Denver, CO, 80208, USA). Journal of Magnetic  
 Resonance (1969-1992), 45(1), 162-9 (English) 1981. CODEN: JCMRA4.  
 ISSN: 0022-2364.  
 AB The characteristic EPR spectrum of a nitroxyl biradical with intermediate  
 electron-electron exchange, changed to a 3-line mononitroxyl EPR spectrum  
 upon coordination of anitroxyl O to the spin-1/2 metal complexes  
 Cu(tfac)2, Cu(hfac)2, VO(tfac)2, or VO(hfac)2 (tfac =  
 trifluoroacetylacetone, hfac = hexafluoroacetylacetonate). Similar  
 behavior was observed for a nitroxyl biradical with large  
 electron-electron  
 exchange when a nitroxyl O was coordinated to VO(tfac)2 or VO(hfac)2.  
 One  
 electron from the dinitroxyl couples with the metal unpaired electron,  
 yielding a net spin of 1/2. Thus the dinitroxyl-paramagnetic metal  
 complex becomes a mononitroxyl. Approx. equilibrium consts. were  
 obtained for  
 these Lewis acid-Lewis base interactions.  
 IT 6146-58-3D, copper and vanadium complexes  
 RL: PRP (Properties)  
 (ESR and equilibrium consts. for)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



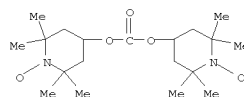
IT 6146-58-3  
 RL: PRP (Properties)  
 (ESR study of interaction of, with metal complexes)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



L4 ANSWER 42 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1982;21272 Document No. 96:21272 Original Reference No. 96:3551a,3554a  
 Effect of electron spin exchange on the interaction of stable nitroxyl  
 radicals with triplet states of cyanine dyes. Borisevich, Yu. E.;  
 Kuz'min, V. A.; Kokorin, A. I.; Sennikov, G. P.; Novozhilova, G. A.;  
 Shapiro, A. B. (Inst. Khim. Fiz., Moscow, USSR). Izvestiya Akademii Nauk  
 SSSR, Seriya Khimicheskaya (9), 2019-23 (Russian) 1981. CODEN: IASKA6.  
 ISSN: 0002-3353.  
 GI



AB The efficiency of quenching of the triplet state of a cyanine dye by  
 stable nitroxyl biradicals, as studied by flash photolysis in EtOH at  
 20°, increased with increasing spin exchange between the  
 paramagnetic centers of the biradical, accompanied by a change in the  
 quenching mechanism (formation of a charge-transfer complex). The  
 quenching rate constant increased from .apprx.1.3 + 10<sup>7</sup> to .apprx.3.0  
 + 10<sup>7</sup> L/mol-s as the absolute values of the spin-exchange integral  
 measured in hyperfine interaction constant units increased from 0.2 to  
 6.4  
 for I [2516-91-8] and II [42585-21-7], resp., because of the increasing  
 contribution of a triplet to the biradical state (triplet-triplet  
 annihilation is negligible).  
 IT 6146-58-3  
 RL: USES (Uses)  
 (quenching by, of cyanine dye triplet state)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

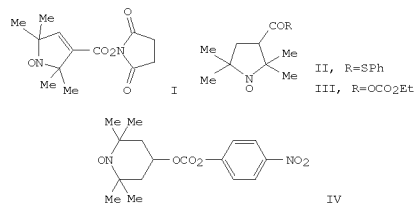


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L4 ANSWER 42 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

L4 ANSWER 43 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1980:192981 Document No. 92:192981 Original Reference No. 92:31201a,31204a  
The study of nitroxide radical active esters as spin labels on muscle protein actin. Belagyi, J.; Grof, P.; Pallai, G.; Tigyi, J. (Cent. Lab., Med. Univ., Pecs, H-7624, Hung.). Acta Biochimica et Biophysica Academiae Scientiarum Hungaricae, 14(3), 183-8 (English) 1979. CODEN: ABBPAP. ISSN: 0001-5253.

GI



AB Nitroxide radical active esters (I, II, III, and IV) were used to label muscle actin and to study the orientation dependence of the ESR spectra of the labeled protein. The labels were located at  $\geq 2$  different sites of the protein with strong polar environment and different mobilities. The ESR spectrum of the strongly immobilized labels exhibited orientation dependence, the N-O bond axis of the spin labels being nearly perpendicular to the long axis of the F-actin threads. The labels underwent a rapid rotational motion about an axis directed perpendicular to the filament axis. The application of nitroxide radical active esters may be useful in the study of ordered systems.

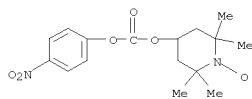
IT 71645-08-4D, actin derivs.

RL: PRP (Properties)  
(ESR of)

RN 71645-08-4 CAPLUS

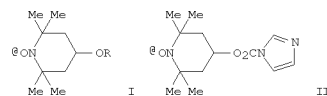
CN 1-Piperidinylloxy, 2,2,6,6-tetramethyl-4-[(4-nitrophenoxy)carbonyl]oxy]-  
(CA INDEX NAME)

L4 ANSWER 43 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



L4 ANSWER 44 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1979:558069 Document No. 91:1580690 Original Reference No. 91:25525a,25528a  
Nitroxyls; IV. Synthesis of spin-labeled  
N-(4-piperidinylloxycarbonyl)imidazoles and 4-piperidinylloxycarbonyl  
azides and their reaction with amino acid derivatives. Hankovszky, H. O.;  
K.; Lex, L.; Tigyi, J. (Biophys. Dep., Univ. Pecs, Pecs, 7643, Hung.).  
Synthesis (7), 530-1 (English) 1979. CODEN: SYNTBF. ISSN: 0039-7881.  
OTHER SOURCES: CASREACT 91:158069.

GI



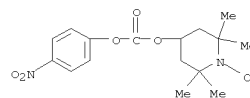
AB Treating piperidin-1-oyl I (R = H) with carbonyldiimidazole in Et<sub>2</sub>O-THF at room temperature gave 76% imidazole II which was treated with p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H in acetone to give 90% imidazolium tosylate whose treatment with NaN<sub>3</sub> in H<sub>2</sub>O at room temperature gave 92% azide I (R = CON<sub>3</sub>) (III). III was also prepared in 66% yield by treating I (R = COC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-p) with NaN<sub>3</sub> in acetone/H<sub>2</sub>O at room temperature. Treating III with H-X-OR<sub>1</sub> (X = Gly, R<sub>1</sub> = Et; X = Phe, Trp, R<sub>1</sub> = H) gave 65-80% I (R = (O-X-OR<sub>1</sub>)).

IT 71645-08-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with sodium azide)

RN 71645-08-4 CAPLUS

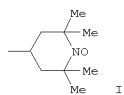
CN 1-Piperidinylloxy, 2,2,6,6-tetramethyl-4-[(4-nitrophenoxy)carbonyl]oxy]-  
(CA INDEX NAME)



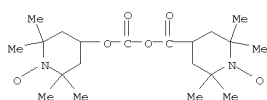
10591533.trn

L4 ANSWER 45 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1978:89431 Document No. 88:89431 Original Reference No. 88:14011a,14014a  
Synthesis of nitroxyl derivatives of benzo[a]pyrene. Schlude, H. (Abt.  
Org. Chem. Spektrosk., Max-Planck-Inst. Biochem., Martinsried, Fed. Rep.  
Ger.). Organic Preparations and Procedures International, 9(6), 289-96  
(English) 1977. CODEN: OPPIAK. ISSN: 0030-4948.

GI



AB R1(CH2)nOCO2R (R = benzo[a]pyren-6-yl, R1 = I, n = 0 or 1 throughout this  
abstract) were prepared by treating R1(CH2)nOH with COCl2, then treating  
the obtained chloroformate with ROAc. Also prepared were R1CO2R,  
RCO2(CH2)nR1, RCO2CO2Et, and RCOR2 (R2 = 1H-imidazol-1-yl).  
IT 65693-98-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and condensation with benzopyrenyl acetate)  
RN 65693-98-3 CAPLUS  
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl-4-[[[(2,2,6,6-tetramethyl-1-oxy-4-  
piperidinyloxy)carbonyloxy]carbonyloxy]- (9CI) (CA INDEX NAME)



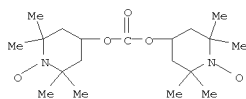
IT 65694-06-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 65694-06-6 CAPLUS  
CN 1-Piperidinyloxy, 4-[[[(benzo[a]pyren-6-yloxy)carbonyloxy]-2,2,6,6-  
tetramethyl- (9CI) (CA INDEX NAME)

L4 ANSWER 46 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1977:424186 Document No. 87:24186 Original Reference No. 87:3847a,3850a  
Acid esters of 4-piperidinol derivatives and their use as stabilizers.  
Murayama, Keisuke; Morimura, Shoji; Yoshioka, Takao; Horiuchi, Hideo;  
Higashida, Susumu (Sankyo Co., Ltd., Japan). Can. CA 997353 19760921, 32  
pp. (English). CODEN: CAXXA4. APPLICATION: CA 1975-237404 19751010.  
AB Methylated aza[5.5]spiroundecanes and acid esters of 4-piperidinol as  
were

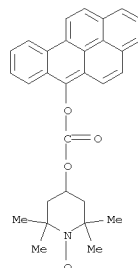
prepared in the presence of alcoholysis catalyst and used as heat- and  
light-stabilizers for polyolefins, PVC [9002-86-2], polyamides, and  
polyurethanes. Thus, 4-hydroxy-2,2,6,6-tetramethylpiperidine [2403-88-5]  
was heated with BzOEt [93-89-0] in xylene containing NaOH to give  
4-benzoyloxy-2,2,6,6-tetramethylpiperidine [26275-88-7], and  
tetrakis(2,2,6,6-tetramethyl-4-piperidyl) pyromellitate [39111-20-1] was  
prepared similarly from the corresponding secondary alc. and added (0.25  
parts/100 parts resin) to CM 1011 (nylon 6) [25038-54-4]. A film from  
this composition exhibited elongation and tensile strength retentions 73

and 70%, resp., after a 300-h exposure to UV at 45°, and 73 and 76%,  
resp., after a 2-h aging at 160°.

IT 6146-58-3  
RL: USES (Uses)  
(heat- and light-stabilizers, for plastics)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)

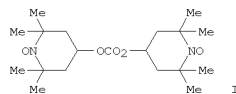


L4 ANSWER 45 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



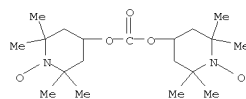
L4 ANSWER 47 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1977:121125 Document No. 86:121125 Original Reference No. 86:19123a,19126a  
Crystal and molecular structure of a stable biradical of  
bis(2,2,6,6-tetramethylpiperidin-1-oxyl) carbonate C19H34N2O5. Shibaeva,  
R. P.; Lobkovskaya, R. M.; Rozenberg, L. P. (Otd. Inst. Khim. Fiz.,  
Chernogolovka, USSR). Zhurnal Strukturnoi Khimii, 17(5), 876-80  
(Russian)  
1976. CODEN: ZSTKAI. ISSN: 0136-7463.

GI



AB X-ray anal. of I yielded crystallog. data, bond lengths, and bond angles.  
The piperidine rings had the chair conformation. The N-O bond (1.287  
Å) made an angle of 19.4° with the CNC plane. The average distance  
between the paramagnetic centers was 11.58 Å, whereas the intermol.  
distance was only 6.0-6.5 Å.

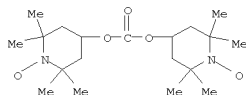
IT 6146-58-3  
RL: PROC (Process)  
(x-ray anal. of)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



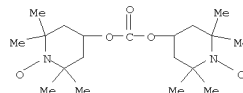


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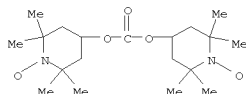
L4 ANSWER 48 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1975:42840 Document No. 82:42840 Original Reference No. 82:6809a,6812a  
 Determination of the distance between the paramagnetic fragments in  
 biradicals from the forbidden transition  $\Delta M_s = 2$ . Dubinskii, A. A.;  
 Grinberg, O. Ya.; Tabachnik, A. A.; Shapiro, A. B.; Ivanov, V. P.;  
 Rosantsev, E. G.; Lebedev, Ya. S. (Inst. Chem. Phys., Moscow, USSR).  
 Biofizika, 19(5), 840-2 (Russian) 1974. CODEN: BIOFAT. ISSN: 0006-3029.  
 AB A method for calcn. of radical-radical distances in diradicals was  
 developed, based on the relative intensities of the EPR spectra of the  
 forbidden transition  $\Delta M_s = 2$ ; calcons. were given for 7 piperidinooxy  
 diradicals.  
 IT 6146-58-3  
 RL: PRP (Properties)  
 (radical-radical distance in, calcn. for)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyl-oxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



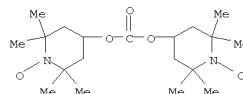
L4 ANSWER 49 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1974:551152 Document No. 81:151152 Original Reference No. 81:23565a,23568a  
 Spin exchange in nitroxyl biradicals. Metzner, E. Kurt; Libertini, Louis  
 J.; Calvin, M. (Lawrence Berkeley Lab., Univ. California, Berkeley, CA,  
 USA). Journal of the American Chemical Society, 96(20), 6515-16  
 (English)  
 1974. CODEN: JACSAT. ISSN: 0002-7863.  
 GI For diagram(s), see printed CA Issue.  
 AB The electron spin exchange energy was measured as a function of solvent  
 and of temperature for 3 nitroxyl biradicals (I,II,III). The effect of  
 temperature  
 can be explained in terms of the flexibility of the mols. The dependence  
 of the exchange on solvent is complex and not readily interpretable;  
 however, it seems to be related to solvent polarity and the structure of  
 the bridge between radical subunits.  
 IT 6146-58-3  
 RL: PRP (Properties)  
 (spin exchange energy in, solvent and temperature effects on)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyl-oxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



L4 ANSWER 50 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1974:424880 Document No. 81:24880 Original Reference No. 81:4021a,4024a  
 Intramolecular exchange and dipole-dipole interactions in solutions of  
 some iminoxyl biradicals. Kokorin, A. I.; Parmon, V. N.; Suskina, V. I.;  
 Ivanov, Yu. A.; Rozantsev, E. G.; Zamaraev, K. I. (Inst. Khim. Fiz.,  
 Moscow, USSR). Zhurnal Fizicheskoi Khimii, 48(4), 953-6 (Russian) 1974.  
 CODEN: ZFKHA9. ISSN: 0044-4537.  
 AB Dipole-dipole interactions and the exchange integrals were calculated  
 from the  
 EPR spectra of diesters of 4-hydroxy-2,2,6,6-tetramethylpiperidinooxy  
 with  
 H<sub>2</sub>SO<sub>2</sub>, H<sub>2</sub>SO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, H<sub>2</sub>CO<sub>3</sub>, and R<sub>2</sub>P(O)(OH)<sub>2</sub> (R = Ph, vinyl, styryl, and  
 $\beta$ -chlorostyryl), and correlated with the distances between  
 N-O-groups. The exchange integrals depended more on the nature of the  
 ester central atom than on the nature of the substituents on it.  
 IT 6146-58-3  
 RL: PRP (Properties)  
 (dipole-dipole interactions and intermol. exchange in, EPR in relation  
 to)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyl-oxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

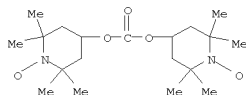


L4 ANSWER 51 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1974:121793 Document No. 80:121793 Original Reference No. 80:19616h,19617a  
 Polyolefins containing 4-piperidinol esters as uv stabilizers. Murayama,  
 Kelsuke; Morimura, Shoji; Yoshioka, Takao; Horuchi, Hideo; Higashida,  
 Susumu (Sankyo Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 48072240 19730929  
 Showa, 4 pp. (Japanese). CODEN: JKKXAF. APPLICATION: JP 1972-42959  
 19720428.  
 AB Polymer stabilizers were 4-piperidinol esters I [R, R<sub>1</sub> = alkyl, R<sub>1</sub> =  
 saturated alicyclic member, CH<sub>2</sub>CMe<sub>2</sub>NR<sub>2</sub>CMe<sub>2</sub>CH<sub>2</sub>, R<sub>2</sub> = O radical, lower  
 alkyl, R<sub>3</sub>  
 = aliphatic or aromatic acyl (n=1), diacyl (n=2), triacyl or trivalent  
 P(O) or P  
 (n=3), tetraacyl or Si (n=4)]. For example, a high d. polyethylene  
 [9002-88-4] sheet (0.5 mm thickness) containing 0.25 phr  
 1-aza-4-benzoyloxy-1,2,2-trimethylspiro[5.5]undecane I [R<sub>1</sub> = (CH<sub>2</sub>)<sub>5</sub>, R<sub>2</sub>  
 =  
 Me, R<sub>3</sub> = Bz, n = 1] [51249-12-8] had uv resistance (time to brittle in a  
 fadeometer at 45.deg.) 1800 hr, compared with 400 hr for a film not  
 containing  
 the stabilizer.  
 IT 6146-58-3  
 RL: USES (Uses)  
 (stabilizers, toward uv light, for polyolefins)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyl-oxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

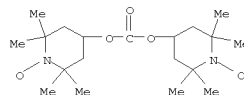


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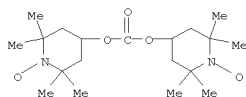
L4 ANSWER 52 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1974:107500 Document No. 80:107500 Original Reference No. 80:17283a,17286a  
Evidence for slow exchange in ESR spectra of nitroxide biradicals.  
Parmon, V. N.; Kokorin, A. I.; Zhidomirov, G. M.; Zamaraev, K. I. (Inst.  
Chem. Phys., Moscow, USSR). Molecular Physics, 26(6), 1565-9 (English)  
1973. CODEN: MOPHAM. ISSN: 0026-8976.  
AB The ESR spectra of bis(2,2,6,6-tetramethylpiperidinol-1-oxyl) sulfide (I)  
and carbonate (II) were measured in PhMe solns. at 17-71°. The ESR  
spectra of II were also measured in CCl4, C6H6, EtOH, Me2CO, and PhMe at  
25°. The spectra of biradicals I and II were attributed to fast  
and slow exchange, resp.  
IT 6146-58-3  
RL: PRP (Properties)  
(ESR of, slow exchange in)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



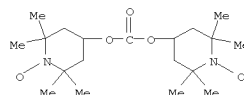
L4 ANSWER 53 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1972:565545 Document No. 77:165545 Original Reference No. 77:27191a,27194a  
4-Piperidynol derivatives as stabilizers for polymers. Murayama,  
Keisuke;  
Morimura, Syoji; Yoshioka, Takao; Horiuchi, Hideo; Higashida, Susumu  
(Sankyo Co., Ltd.). Ger. Offen. DE 2204659 19720810, 35 pp. (German).  
CODEN: GWXXBX. APPLICATION: DE 1972-2204659 19720128.  
AB Twenty-five title compds. [I; n = 1; R = H or Me; R1 = R2 = Me; R1R2 =  
(CH2)5, CH2CMe2NHCMe2CH2, or CH2CMe2NMeCMe2CH2; R3 = Ac, n-Cl7H35CO, Bz,  
p-ClC6H4CO, p-H2NCG4CO, or β-ClOHCOC; or n = 2-4; R = H; R1 = R2 =  
Me; R3 = CO, COCO, CO(CH2)2CO, CO(CH2)4CO, o- and p-(OC)4C6H4, P, PO,  
1,3,5-(OC)3C6H3, Si, or 1,2,4,5-(OC)4C6H2] or their N-oxides were  
prepared  
by reaction of I (n = 1, R3 = H) with R3(OR4)n (R4 = Me or Et). I were  
used at 0.2-0.5% concns. in polymers, e.g. Geon 103 EP [poly(vinyl  
chloride)] [9002-86-2] or polyethylene (II) [9002-88-4], as heat and  
light  
stabilizers. Thus, a small amount KOH was added to I (n = 1, RR2 = Me,  
R3 = H) and BrOEt in xylene, the mixture heated at 120.deg. with complete  
removal  
of EtOH formed, and kept 2 hr at 140.deg. to give  
4-benzoyloxy-1,2,2,6,6-pentamethylpiperidine (III) [16597-34-5]. Plates  
(0.5 mm thick), made from II containing 0.25% III were heated at 45.deg.  
under  
uv irradiation The samples became brittle after 1420 hr as compared  
with 400  
hr for II containing no III.  
IT 6146-58-3  
RL: USES (Uses)  
(light stabilizers, for plastics)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



L4 ANSWER 54 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1972:78698 Document No. 76:78698 Original Reference No. 76:12651a,12654a  
Nitroxides. XLVI. Determination of the N-O stretching frequency in  
piperidinic nitroxide free radicals. Morat, C.; Rassat, A. (Lab. Chim.  
Org. Phys., C.E.N. Grenoble, Grenoble, Fr.). Tetrahedron, 28(3), 735-40  
(French) 1972. CODEN: TETRAH. ISSN: 0040-4020.  
AB By a comparison of the ir spectra of piperidinic nitroxide radicals with  
spectra of the corresponding 15N-labeled radicals, the ir frequency of  
the  
N-O stretching vibration was measured.  
IT 6146-58-3  
RL: PRP (Properties)  
(ir spectrum of)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)

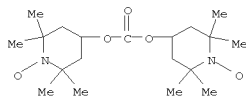


L4 ANSWER 55 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1971:456467 Document No. 75:56467 Original Reference No. 75:8903a,8906a  
Asymmetric line broadening in the electron resonance spectra of  
biradicals. Luckhurst, G. R.; Pedullì, G. F. (Dep. Chem., Univ.  
Southampton, Southampton, UK). Molecular Physics, 20(6), 1043-55  
(English) 1971. CODEN: MOPHAM. ISSN: 0026-8976.  
AB At high temps. the dominant relaxation process which detts. the linewidths  
in the electron resonance spectra of flexible biradicals is modulation of  
the scalar electron-electron exchange interaction. In systems of high  
viscosity, the modulation of the exchange interaction is often quenched,  
and the rotational modulation of the anisotropic magnetic interactions  
now  
constitutes the principal relaxation mechanism. A theoretical expression  
is derived for the broadening which results from this relaxation process.  
The applications of the theory to the determination of mol.  
configurations,  
electron-electron separations, and the sign of the exchange interaction  
are illustrated by comparison with the electron resonance spectrum of  
bis(2,2,6,6-tetramethyl-piperidinol-1-oxyl)carbonate. The theory is also  
of value in understanding the spectra of partially immobilized biradical  
spin labels.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, line-broadening in relation to structure  
of)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)

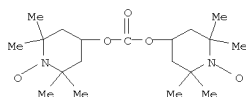


10591533.trn

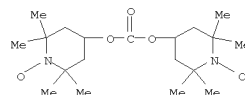
L4 ANSWER 56 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1970:116329 Document No. 72:116329 Original Reference No. 72:20967a,20970a  
Symmetric linewidth variations in the electron resonance spectra of  
biradicals. Luckhurst, Geoffrey R.; Pedulli, G. F. (Dep. Chem., Univ.  
Southampton, Southampton, UK). Molecular Physics, 18(3), 425-8 (English)  
1970. CODEN: MOPHAM. ISSN: 0026-8976.  
AB Linewidth variations exhibited by the nitroxide biradical  
bis(4-hydroxy-2,2,6,6-tetramethylpiperidinoxy) carbonate were reported.  
The singlet and triplet lineqldths increased with increasing  
temperature, and  
in although the singlet lines never sharpened, the triplet lines decreased  
width at .apprx.410°K. The results, which indicated that the  
spectral d. must increase with increasing temperature, were interpreted  
by using  
a 2-configuration model.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, symmetric line width variations in)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



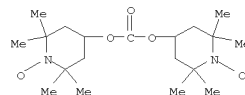
L4 ANSWER 58 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1968:456158 Document No. 69:56158 Original Reference No. 69:10495a,10498a  
Electron paramagnetic resonance spectroscopic study of nitroxide mono-  
and  
bi-radicals. Lemaire, Henri Commis. Energ. At. (Fr.), Rapp., CEA-R  
3119,  
108 pp. Avail. CEA. (French) 1967. CODEN: CMEAAQ.  
AB The hyperfine E.P.R. spectrum of nitroxide monoradicals is dominated by  
magnetic interaction of electrons with the N nucleus. Only the magnitude  
of the isotropic, or contact, interaction is measurable due to free  
tumbling. This magnitude depends on the structure and is altered by the  
solvent. The anisotropic, or dipole, interaction gives the values of the  
hyperfine tensor and the g-factor. For nitroxide bi-radicals, the  
hyperfine spectrum also depends on an exchange between singlet and  
triplet  
states of the dimer. The sign of this exchange can be evaluated. In  
both  
mono- and biradicals, increased solvent viscosity causes line-broadening.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, exchange in relation to)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



L4 ANSWER 57 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1968:463449 Document No. 69:63449 Original Reference No. 69:11867a,11870a  
Is the terephthalic acid diester of  
4-hydroxy-2,2,6,6-tetramethylpiperidinoxy a strong [spin] exchange or  
weak [spin] exchange biradical. Lemaire, H.; Rassat, A.; Rey, P.;  
Luckhurst, G. R. (Lab. Chim. Org. Phys, C.E.N., Grenoble, Fr.).  
Molecular  
Physics, 14(5), 441-7 (French) 1968. CODEN: MOPHAM. ISSN: 0026-8976.  
GI For diagram(s), see printed CA Issue.  
AB E.P.R. spectra were measured at room temperature on 5 + 10-4M solns. of  
•RH (I), p-[•RC(:O)]2C6H4 (II), •RC(:O)CH:CH:C(:O)R•  
(III), •RC(:O)(CH2)4C(:O)R• (IV), and•ROC(:O)OR• (V) in  
Me2NCHO. II and III exhibited spectra with 3 equal lines; IV, 5 lines  
characteristic of strong spin exchange; V was intermediate. The ratios  
of  
electron resonance line intensities of I to those of II-V were 1.925,  
2.202, 0.584, and 0.669 for II, III, IV, and V (0.666 is the theoretical  
ratio for intermediate or strong exchange). II and III exhibit weak spin  
exchange; IV, strong spin exchange; V, intermediate spin exchange.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)

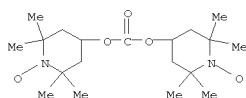


L4 ANSWER 59 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1968:414757 Document No. 69:14757 Original Reference No. 69:2791a  
Nitroxides. XXVI. Effect of temperature on the spectral hyperfine  
structure of the nitroxide biradicals. Lemaire, Henri; Rassat, Andre;  
Rey, Paul (Lab. Chim. Org. Phys., C.E.N., Grenoble, Fr.). Bulletin de la  
Societe Chimique de France (3), 886-92 (French) 1968. CODEN: BSCFAS.  
ISSN: 0037-8968.  
AB The biradicals for study were prepared by treating 2 mols.  
2,2,6,6-tetramethyl-4-piperidinol 1-oxide with 1 mol. of a diacyl halide.  
The esters prepared were carbonate (I), fumarate (m.184°), oxalate  
(II), succinate (III), glutarate (m. 107°), adipate, pimelate,  
suberate (m. 126°), sebacate, terephthalate (IV), and  
2-norbornene-trans-5,6-dicarboxylate (m. 192°). All except II were  
purified by chromatog. in C6H6 on Al2O3 (activity III). E.P.R. spectra  
were obtained for solns. in HCONMe2. Temperature was controlled to  
±2°. Throughout the range of -100° to +130°, IV  
showed but 3 lines separated by 15.6 oe., the same as for the parent  
radical.  
Little or no exchange is evident. I on the other hand shows a hyperfine  
splitting, with 7 major lines and 6 satellites. All other mols. showed a  
variation with temperature As an example, III at low temperature (-56°)  
has 3  
lines separated by 15.6 oe.; a 2nd set of lines begins to appear at  
.apprx.  
-26°, and at -8°, 7 lines are visible. These increase in  
intensity to the highest measurement temperature, 144°. The changes are  
attributed to changes in mol. conformation.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, conformation in relation to)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
INDEX NAME)



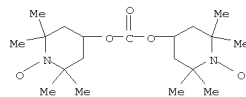
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L4 ANSWER 60 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1967:486393 Document No. 67:86393 Original Reference No. 67:16266h,16267a  
Spin exchange in nitroxide biradicals. Glarum, Sivert H.; Marshall, James  
H. (Bell Telephone Labs., Inc., Murray Hill, NJ, USA). Journal of Chemical Physics, 47(4), 1374-8 (English) 1967. CODEN: JCPSAG. ISSN: 0021-9606.  
AB The dependence of the electron spin-exchange energy on temperature and solvent  
has been studied for the carbonate, oxalate, and succinate diesters of tetramethylpiperidinoloxyl. An analysis is given of exchange effects on E.S.R. line positions, intensities, and widths. For the carbonate diester the exchange energy is constant at low temps. As the temperature is raised this energy gradually decreases, passes through a min., and then increases exponentially. Interpretation suggests that at low temps. exchange occurs through an indirect process involving the core of  $\sigma$  electrons, whereas at high temps. a direct exchange process is more important.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, spin exchange energy and)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA INDEX NAME)

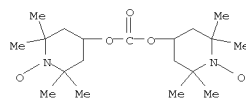


L4 ANSWER 61 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

L4 ANSWER 61 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1967:463572 Document No. 67:63572 Original Reference No. 67:11918h,11919a  
Nitroxides. XX. Electron paramagnetic resonance of a nitroxide biradical: determination of the exchange sign. Lemaire, Henri (C.E.N., Grenoble, Fr.). Journal de Chimie Physique, 64(3), 559-71 (French) 1967. CODEN: JCPQAY.  
GI For diagram(s), see printed CA Issue.  
AB cf. 67: 43656u. E.P.R. spectra of dilute solns. of bis(2,2,6,6-tetramethyl-4-hydroxypiperidine 1-oxide) carbonate (I) in dimethylformamide and in p-azoxyanisole were studied as a function of temperature. For this biradical the electron-electron exchange interaction and the electron-nuclei hyperfine interactions are of the same order of magnitude. In the isotropic phase the spectrum shows 6 lines due to 15N, each line having an electronic or a nuclear degeneracy. The exchange interaction, J, is found to be temperature dependent, due to conformational changes of I. Different conformations can be assumed either by inversion of one or both piperidine rings, or through their rotation around C-O bonds. The results are consistent with the lower-energy conformation having both hexaet. rings in the chair form and being stretched so that the distance between the 2 N-O groups is maximum. In the nematic mesophase of p-azoxyanisole where the electron-electron dipolar interaction is not averaged out, the degeneracy of the electronic transitions  $M_s = 0 \leftrightarrow M_s = \pm 1$  is removed, and the main lines of the isotropic spectrum are split into doublets. The results are discussed in terms of the anisotropic tensors of nitroxide monoradicals and of the conformation of I. The shift of the lines is used to determine the relative sign (opposite) of the singlet-triplet splitting J and of Dzz in the electron-electron dipolar tensor. Marked differences in the linewidths of various hyperfine lines result from temperature modulation, either of J or of the anisotropies. These differences provide a check on the sign of J and on the conformation of I as determined from the nematic phase results. The ground state of the biradical I is a singlet.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA INDEX NAME)

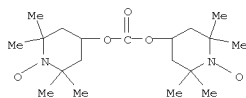


L4 ANSWER 62 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
1967:459414 Document No. 67:59414 Original Reference No. 67:11163a,11166a  
Temperature influence on the electron paramagnetic resonance spectrum of a nitroxide biradical. Lemaire, Henri; Levy, Bernard; Rassat, Andre (C.E.N., Grenoble, Fr.). Colloques Internationaux du Centre National de la Recherche Scientifique, Volume Date 1966, 164, 401-18 (French) 1967. CODEN: COINAV. ISSN: 0366-7634.  
AB The E.S.R. spectrum of a nitroxide biradical, in which the J.vector.S1..vector.S2 exchange interaction is of the same order of magnitude as the A.vector.I1..vector.S1 isotropic interaction, is composed of 6 lines when the N nucleus is 15N. The influence of temperature on the spectrum of such a compound dissolved in HCONMe2 was studied. The splittings and the linewidths depend strongly on the temperature. This is because the conformation of the biradical is temperature-dependent and the anisotropies of the Lande factor and the dipolar electron-nucleus and electron-electron interactions contribute to the linewidths. A crude theory suggests that a crossed term between the electron-electron dipole interaction and the anisotropy of the g factor explains the difference observed in linewidth between the  $S_z = 0 \leftrightarrow S_z = +1$  and  $S_z = 0 \leftrightarrow S_x = -1$  transitions. 26 references.  
IT 6146-58-3  
RL: PRP (Properties)  
(electron spin resonance of, hyperfine structure in, temperature and)  
RN 6146-58-3 CAPLUS  
CN 1-Piperidinylloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA INDEX NAME)



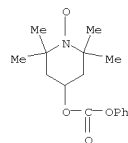
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L4 ANSWER 63 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1967:2881 Document No. 66:2881 Original Reference No. 66:667a,670a  
 Inhibition of radical polymerization with nitroxide mono- and biradicals.  
 Ruban, L. V.; Buchachenko, A. L.; Neiman, M. B.; Kokhanov, Yu. V.  
 Vysokomolekulyarnye Soedineniya, 8(9), 1642-6 (Russian) 1966. CODEN:  
 VMSDAS. ISSN: 0042-9368.  
 AB Exptl. behavior of the title radicals upon reaction with alkyl radicals  
 on chain propagation are described. The structural formulas of both  
 nitroxide mono- and biradicals are given. Kinetic measurements of the  
 inhibiting effect of the monoradicals on styrene polymerization at  
 50°, initiated by azodiisobutyronitrile, were carried out. The  
 linear termination constant was found to be  $2.1 \cdot 10^4$  l./mole/sec.  
 ( $\pm 5\%$ ). In general, it was found that nitroxide monoradicals with  
 different substituents have almost equal inhibiting effects. As for  
 biradicals, a scheme for the recombination of alkyl radicals (like  
 cyanoisopropyl and methylbenzyl) with nitroxide biradicals is suggested.  
 The  $k_2/k_1$  values for these biradicals are determined and tabulated. It  
 is shown that the spin reactivity in the biradicals exceeds that in the  
 monoradicals. This fact is explained on the basis of adiabaticity of the  
 recombination.  
 IT 6146-58-3  
 RL: USES (Uses)  
 (inhibitors, for polymerization of styrene)  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

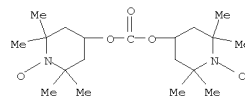


L4 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1966:35200 Document No. 64:35200 Original Reference No. 64:6455f-h,6456a-f  
 Nitroxides. XVII. Stable biradicals in the nitroxide series. Briere,  
 Roselyne; Dupeyre, Rose-Marie; Lemaire, Henri; Morat, Claude; Raszat,  
 Andre; Rey, Paul Bulletin de la Societe Chimique de France 3290-7  
 (French) 1965. CODEN: BSCFAS. ISSN: 0037-8968.  
 GI For diagram(s), see printed CA Issue.  
 AB cf. preceding abstract Condensation of triacetoneamine (I) with H2NNH2 in  
 refluxing (HOCH2CH2)2O gives 50% azine (II), m. 136°. Oxidation of II  
 with H2O2 in the presence of phosphotungstic acid gave a mixture  
 (separated by chromatography on Al2O3) of the monoradical (V), m. 144°, and the  
 biradical (IV), m. 184°. With excess H2O2 in basic medium, the  
 yields are 23% IV and 47% V, for a 3-hr. stirring at ordinary  
 temperature IV  
 can also be obtained by the same oxidation process from V in aqueous  
 solution, or by  
 direct condensation of H2NNH2 to give III in refluxing (HOCH2CH2)2O in  
 16.6% yield. In the same way, condensation between 2 moles  
 2,2,5,5-tetramethyl-3-pyrrolidone (VI) and 1 mole H2NNH2 yields 43%  
 corresponding azine (VII), m. 157°. Oxidation of VII by H2O2 in the  
 presence of phosphotungstic acid gives, after 4 hrs., an orange  
 precipitate, mixture of IX and X, separated by recrystn. in petroleum  
 ether, where X only is soluble. The aqueous solution, ether-extracted, also  
 gives crystals,  
 mixts. of IX and X, separable by chromatography on Al2O3. IX, m.  
 198°, and X, m. 147°, are obtained in 40 and 19% yield,  
 resp. IX can also be produced by condensation of 2 moles of the radical  
 ketone VIII and 1 mole H2NNH2 in (HOCH2CH2)2O solution in 14% yield.  
 Condensation of 2,2,6,6-tetramethyl-piperidin-4-ol 1-oxide (XI) with  
 COCl2, (COCl)2, or p-ClCO-C6H4COCl gives the corresponding carbonate  
 (XII)  
 (m. 190°), oxalate (XIII) (m. 177°), or terephthalate (XIV)  
 (m. 215°), obtained in 53%, 50%, and 69% yields, resp. IV and XII,  
 with the nitroxide 14N replaced by 15N (I = 1/2), have also been  
 prepared,  
 starting from 15NH4Cl. With the biradicals prepared (IV, IX, XII-XIV),  
 it is possible to check the different predictions of theory, according to  
 the relative magnitudes of the interaction J, between the 2 unpaired  
 electrons, and the hyperfine splitting aN. If J « aN, the E.P.R.  
 spectrum is composed of 3 equal lines, as in the monoradical (XIII, XIV).  
 If J » aN, the hyperfine E.P.R. spectrum consists of 5 lines, with  
 resp. intensities 1:2:3:2:1, as if each electron spent 1/2 the time on  
 the each N nucleus, the hyperfine splitting being reduced to aN/2: this is  
 the case for IV, where the 7.40 oe. splitting is exactly 1/2 the hyperfine  
 splitting measured for the monoradical V in the same solvent (Me2NCO), aN  
 = 14.80 oe. The band widths (oe.) (2.40 for IV and 2.2 for V) are quite  
 similar, which shows that dipolar interaction between the unpaired  
 electrons contributes little to the band width in a solution with little  
 viscosity. When the E.P.R. spectrum of IV with 15N is performed, the  
 expected 1:2:1 triplet, due to interaction only with the nitroxidic N, is  
 obtained with a splitting of 10.5 oe., normal for this isotopic  
 substitution. The intermediate case which was also recorded shows the  
 predicted outer satellites, 6 for 14N and 2 for 15N, in the E.P.R.  
 spectra  
 of XII and its 15N derivative, with J/aN = 1.85; aN = 15.6 oe. (14N),  
 and J/aN

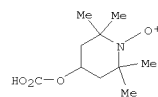
L4 ANSWER 64 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1966:60641 Document No. 64:60641 Original Reference No. 64:11401g-h,11402a  
 Stabilization of polyurethans. (Toyo Spinning Co., Ltd.). NL 6502388  
 19650827, 18 pp. (Unavailable). PRIORITY: JP 19640226.  
 AB Polyurethans are stabilized against light and gases or vapors by mixing  
 them (at any desired stage in the preparation or processing, but  
 preferably in solution in a polar solvent) with 5-30 g./kg. of a phenylthiourea of  
 formula  
 XCG4HNHCSNRX', in which X is H, a halogen, or an alkyl, aryl, or aralkyl  
 group; X' is H, alkyl, aryl or aralkyl; R is H or Cl-4 alkyl; X and X'  
 may contain halogen or Cl-4 alkyl-substituted Ph; and (or) 0.3-20 g./kg. of  
 an anhydride of a carboxylic acid with a dissociation constant at 25° of  
 10-4 to 10-5. Thus, a prepolymer was prepared by stirring 1 hr. at  
 85° of a mixture of 40 parts poly(tetramethylene ether) glycol (mol.  
 weight 100) and 20 parts methylenebis(4-phenyl isocyanate). The product  
 was dissolved in HCONMe2 (I) and cooled to 0°. A solution of 2 parts  
 N2H4.H2O in 50 parts I was added, the mixture stirred for 15 min., and  
 the reaction stopped by addition of 3 parts of a 10% solution of  
 monoethanolamine in I. To 10 parts of the solution, 0.03 part diphenylthiourea was added,  
 and the mixture extruded at room temperature into a dry spinning column at  
 180°. In a standardized burning test, the thread was rated 4 (5  
 meaning no discoloration, and 1 severe discoloration). The same sample,  
 but containing no diphenylthiourea, was rated 1.  
 IT 7392-64-5, Carbonic acid, phenyl ester, ester with  
 4-hydroxy-2,2,6,6-tetramethylpiperidinooxy  
 (polyoxymethylene stabilization with polyamides and)  
 RN 7392-64-5 CAPLUS  
 CN Piperidinoxy, 4-hydroxy-2,2,6,6-tetramethyl-, phenyl carbonate (ester)  
 (8CI) (CA INDEX NAME)



L4 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 = 1.32; aN = 21.90 oe. (15N). The value of J depends upon both solvent  
 (C6H6, MeCN, Me2SO, Me2NCHO, H2NCHO) and temp.  
 IT 6146-58-3  
 (Derived from data in the 7th Collective Formula Index (1962-1966))  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

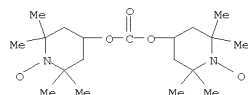


IT 875835-02-2, Piperidinoxy, 4-hydroxy-2,2,6,6-tetramethyl-,  
 carbonate (ester)  
 (magnetic resonance absorption of)  
 RN 875835-02-2 CAPLUS  
 CN Oxonium, [4-(carboxyoxo)-2,2,6,6-tetramethyl-1-piperidinyl]- (CA INDEX  
 NAME)

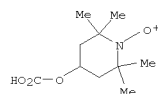


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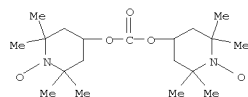
L4 ANSWER 66 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1965:403240 Document No. 63:3240 Original Reference No. 63:574b-c New  
 stable iminoxyl radicals. Rozantsev, E. G.; Golubev, V. A.; Neiman, M.  
 B.; Kokhanov, Yu. V. (Inst. Chem. Phys., Moscow). Izvestiya Akademii  
 Nauk SSSR, Seriya Khimicheskaya (3), 572-3 (Russian) 1965. CODEN: IASAK6.  
 ISSN: 0002-3353.  
 AB 2,2,6,6-Tetramethyl-4-hydroxypiperidin-1-oxyl radical in C6H6 was treated  
 with (CH2)6(NCO)2 and after heating 4 hrs. gave  
 bis(2,2,6,6-tetramethylpiperidin-1-oxyl) hexamethylenedicarbamate, pink,  
 m. 115-16°, similarly, reactions with dichlorides of dicarboxylic  
 acids in pyridine gave the corresponding esters of the above alc. with  
 indicated acids: carbonic, m. 180°; oxalic, m. 179°;  
 succinic, m. 141°; adipic, m. 122°; pimelic, m. 90°;  
 sebacic, m. 101°; terephthalic, m. 217°. Also reported was  
 N,N'-bis(2,2,6,6-tetramethyl-4-piperidin-1-oxyl)-urea, m. 198-9°,  
 prepared by oxidation of the dipiperidyl analog by means of MnO2. The  
 E.F.R. spectra of the products were reported. The spectra showed changes  
 in electronic interaction with changes in distances between the  
 paramagnetic centers.  
 IT 6146-58-3  
 (Derived from data in the 7th Collective Formula Index (1962-1966))  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)



IT 875835-02-2P, Piperidinoxy, 4-hydroxy-2,2,6,6-tetramethyl-,  
 carbonate (ester)  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 875835-02-2 CAPLUS  
 CN Oxonium, [4-(carboxyoxo)-2,2,6,6-tetramethyl-1-piperidinyl]- (CA INDEX  
 NAME)



L4 ANSWER 67 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



L4 ANSWER 67 OF 67 CAPLUS COPYRIGHT 2009 ACS on STN  
 1965:403239 Document No. 63:3239 Original Reference No. 63:573f-h,574a-b  
 Condensation of 5-nitro-2-furaldehyde with 4-methyl- or 4-ethylpyridine.  
 Harada, Kinji; Emoto, Sakae (Inst. Phys. Chem. Res., Tokyo). Chemical &  
 Pharmaceutical Bulletin, 13(3), 389-91 (English) 1965. CODEN: CPBTAL.  
 ISSN: 0009-2363.  
 GI For diagram(s), see printed CA Issue.  
 AB The condensation of 5-nitro-2-furaldehyde (I) with 2-methyl- (II) and  
 4-methylpyridine (III) and with 2-ethyl- (IV) and 4-ethylpyridine (V) was  
 studied in order to obtain potential antibacterial agents. While  
 condensation of I with III and V on being heated 2 hrs. at 100° in  
 Ac2O has been reported (Belg. 615,319, CA 58, 11333h) to give VI and VII,  
 reinvestigation of these expts. has given only .apprx.10% yields crude VI  
 and VII, the purification of which was very difficult. Improved yields  
 were now obtained by using a mixture of AcOH and Ac2O as solvent. To  
 4.7 g.  
 I and 3.2 g. III (dried 12 hrs. over KOH) in 20 ml. AcOH was added slowly  
 during 20 min. 5 ml. Ac2O at 60-70° with stirring, the solution heated  
 3 hrs. at 108° with stirring and cooled, the precipitate filtered off  
 [the  
 filtrate (A) was kept] and extracted with 600 ml. hot MeOH, and the  
 extract  
 treated with C and evaporated in vacuo to give crude VI; filtrate A  
 evaporated in  
 vacuo, the residue poured into dilute HCl cooled in ice, and the  
 precipitate  
 filtered off and washed with saturated aqueous NaHCO3 and H2O gave crude  
 VI;  
 recrystn. of combined crude VI (3.5 g.) from MeOH gave 2.1 g. VI, m.  
 163-4°. To 2 g. I and 1.52 g. V in 8 ml. AcOH was added slowly 1.4  
 ml. Ac2O at 70° with stirring, the solution heated and stirred 3 hrs.  
 at 110° and evaporated in vacuo, and the residue worked up like VI to  
 give 1.18 g. VII, m. 150-1° (MeOH). Similar condensation of I with  
 II and IV gave VIII, m. 176-7°, and IX, m. 149-9.5°, resp.  
 To 1.5 g. I and 2 g. III (dried 12 hrs. over KOH) was added 6 ml. Ac2O  
 (spontaneous temperature rise), the mixture let stand overnight at room  
 temperature,  
 heated 4 hrs. at 50-5°, and cooled, and the precipitate filtered off and  
 washed with 30 ml. Et2O to give 1.05 g. 5,5'-dinitro-2,2'-fuoin  
 diacetate  
 (X), m. 253-4° (HCONMe2). This reaction also proceeded in the  
 presence of V or 3-methylpyridine in lieu of III. VI-IX showed  
 antibacterial action.  
 IT 6146-58-3  
 (Derived from data in the 7th Collective Formula Index (1962-1966))  
 RN 6146-58-3 CAPLUS  
 CN 1-Piperidinyloxy, 4,4'-[carbonylbis(oxy)]bis[2,2,6,6-tetramethyl- (CA  
 INDEX NAME)

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